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IDENTIFIERS Morse Code

ABSTRACT

The first section of this packet consists of worksheets, exercises, software descriptions and "best practices" guidelines for teachers of students with disabilities. The second section reports on findings of a 1989 task force on transition procedures for mainstreaming of the physically impaired, including procedures for referral, eligibility, and placement, as well as "out of district" placement and several task responsibility matrices defining roles of the many support staff, adminstrators, family members, and educators who may be involved in the mainstreaming process. The third section presents guidelines for computer access observation, system design, and hardware/software selection including adaptive equipment. The fourth section covers expanded keyboard overlays highlighting story sequencing and assessment. The fourth section offers simple directions for setting up a Morse Code system appropriate to interfacing with any of several personal computer systems, with worksheets for Morse Code instruction. The final section presents an inservice training model emphasizing computer applications in the classroom. A list of contact agencies and companies is included. (PB)

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Tread on my tires....

so I can go The Extra Mile!

(education for the physically impaired)

Florida Education Technology Conference
February 1990

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PUBLIC LAW 94-142
Education for all Handicapped Children (1975)

Educators have been mandated by Public Law 94-142, the Education for all Handicapped Children Act of 1975, to provide handicapped children with a free, appropriate public education in the least restrictive environment. In the words of P. L. 94-142:

> "To the maximum extent appropriate, handicapped children, including children in public or private institutions or other facilities, are educated with children who are not handicapped.., and special classes, separate schooling or other removal of handicapped children from regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes with use of supplementary aids and services cannot be achieved satisfactorily." (Education for all Handicapped Children Act of 1975)

The least restrictive environment requirement of P.L. 94-142 and the term mainstreaming have been regarded as synonymous by many people. However, the law is designed to guarantee that all children are provided with the opportunity to participate in normal day-to-day activities of school life. It does not mean the wholesale "dumping" of special education students in regular classes. The Exceptional Student Education Department of Palm Beach County defines mainstreaming as the temporal, instructional and social integration of eligible exceptional pupils with normal peers. The amount of mainstreaming is based on an ongoing, individually determined, educational needs assessment, requiring clarification of responsibility for coordinated planning and programming by regular and special education administrative, instructional, and support personnel. Thus mainstreaming is not a concept which can be charted or graphed; it needs to remain flexible to accommodate the structure of each school and to allow for the most appropriate setting for each child. Because each school is uniquely administered, flexible mainstreaming criteria that applied to all situations would be an infringement on the leadership in each school center.

P. L. 99-457
Early Childhood Education (1986)

"Whereas, Congressional testimony and research indicate that early intervention and preschool services help enhance intelligence in children; produce substantial gains in physical development, congitive development, language and speech development, psychosocial development, and self-help skills; prevent the development of secondary handicapping conditions; reduce family stress; reduce societal dependency and institutionalization; reduce the need for special class placement in special education programs once the children reach school age; and save society and our nation's schools substantial costs; ....

Whereas, it is the policy of the United States to provide financial assistance to states to develop and implement a statewide, comprehensive, coordinated, multidisciplinary, interagency program of early intervention service for all handicapped infants and toddlers and their families; and provide a preschool grant program with enhanced incentives for states to serve all three to five year old handicapped children by school year 1990-91....

P. L. 100-407 (1988)
Technology Related Assistance to Individuals with Disabilities

FINDINGS AND PURPOSES:

1. During the past decade, there have been major advances in modern technology. Technology is now a powerful force in the lives of most residents of the United States.

2. For all individuals, technology can provide important tools for making the performance of tasks quicker and easier.

3. For some individuals with disabilities, assistive technology is a necessity that enables them to engage in or perform many tasks. The provision of assistive technology devices and assistive technology services enables some individuals with disabilities to:
   A. have greater control over their own lives.
   B. participate in school, and work environments, and in their communities;
   C. interact to a greater extent with nondisabiled individuals; and
   D. otherwise benefit from opportunities that are taken for granted by individuals who do not have disabilities.

4. Although the development of assistive technology devices designed to assist individuals with disabilities is still in its early stages, there already exist a substantial number of assistive technology devices, including simple adaptations to existing equipment, that could significantly benefit, in all major life activities, individuals of all ages with disabilities. Such devices, including adaptations could be used in programs and activities such as early intervention, education, rehabilitation and training, employment, residential living, independent living, recreation, and other aspects of daily living.

5. The use of assistive technology devices and services by individuals with disabilities can reduce the costs of the disabilities to society, individuals with disabilities, and families of individuals with disabilities by reducing expenditures associated with early intervention, education, rehabilitation, health care, transportation, telecommunication services, and other services required by individuals with disabilities.

6. Many individuals with disabilities do not have access to the assistive technology devices and assistive technology services that such individuals need to allow such individuals to function in society commensurate with their abilities. States do not have comprehensive programs for making available technology-related assistance to individuals with disabilities. There is a lack of:
   A. resources to pay for such devices and services;
   B. trained personnel to provide such devices and services and to assist individuals with disabilities to use such devices and services;
   C. information about the potential of technology available to individuals with disabilities, the families or representatives of individuals with disabilities, individuals who work for public agencies and private entities that have contact with individuals with disabilities (including insurers), employers, and other appropriate individuals;
   D. coordination among existing State human services programs and among such programs and private agencies, particularly with respect to transitions between such programs and agencies; and
   E. capacity of such programs to provide the necessary technology-related assistance....

The purposes of this Act are as follows:

1. To provide financial assistance to the States to help each State to develop and implement a consumer-responsive state-wide program of technology-related assistance for individuals of all ages with disabilities...

Parent Rights
as defined in P. L. 94-142

Right to an Education - P. L. 94-142 states that any child is capable of benefitting from an education; consequently, there is no reason to deny educational opportunities to any child.

Right to a Free Education - P. L. 94-142 states that the state must pay for the education of all its children, whether normal or handicapped, so that there will be no financial barriers to educational opportunities.

Right to an Appropriate Education - P. L. 94-142 requires that an Individualized Education Plan (IEP) be developed for and provided to each handicapped child at no cost to the parents. The IEP serves two purposes. First, it specifies goals, services and evaluation criteria for each child. Second, it helps to determine the educational placement that will help the child accomplish the educational goal stated in the IEP.

Right to Least Restrictive Environment (LRE) - P. L. 94-142 states that "least restrictive environment" education with nonhandicapped children, is desirable if it benefits the child. P.L. 94-142 gives the handicapped child equal opportunity for learning in a setting that best supports academic, social and emotional maturity.

Right to Due Process - P. L. 94-142 gives parents or legal guardians the right to:

be informed of all educational decisions regarding indentification, evaluation, placement, and programming for their children.

participate in educational decision-making and to accept or reject findings, decisions, or recommendations.

request a due process hearing to resolve disagreements. Due process hearings allow parents and schools the opportunity to fairly present their points of view.

Right to Confidentiality - P. L. 94-142 closely follows the Buckley Amendment, which assures that confidential or identifiable data will not be shared inappropriately or without the written consent of parents or guardians.

Right to Non-Discriminatory Testing - P. L. 94-142 requires that tests not discriminate on the basis of race, culture, language or communication method. Tests must be appropriate and validated for the specified handicap. The evaluator must be fluent in the child's native language or use an interpreter. The evaluator must be certified and qualified to do the assessment.

The following "educational prescriptions" were used by Jennifer Dooley during an IBM educational training session for teachers. Jennifer Dooley was a special education teacher before she began work for IBM. She works in the IBM Atlanta, GA regional office and specializes in training teachers on techniques to successfully integrate IBM software into exceptional student education curriculum.

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Who Am I?

My name is Tom. I am eleven years old. I had a rough time in school so I dropped out last week. The teacher said that I have an IQ of 81 but she thinks I am stubborn and show very little emotion. She told Mr. Rogers that I enrolled in school two years late due to Scarlet fever and respiratory infections. She said that was the reason I could not hear good. She also told him that I have emotional problems because she read in my folder that I like to play with matches and that I burned my father's barn down.

Who am I?

My name is Sam. I am nine years old. My school records say that my school adjustment is very poor and that I am unsociable. They seem to say that I am "disturbed", that's what my teacher called me. I just had an emotional breakdown...they are thinking about removing me from school. According to my teacher, I frequently withdraw into a fantasy world. My IQ is somewhere around 82; according to the most recent IQ test. I don't think the public schools have anything to offer me.

Who am I?

My name is Mary. I am eleven years old. I'm not doing so good in school. The teacher says that I daydream a lot and that I seem to prefer isolation. Phobias and attention getting behavior seem to dominate my emotional health. From observing my teachers behavior, I'm not sure how long she can put up with me. I have to wear a backbrace because of a spinal defect. It bothers me a lot. I feel that I am a lot of trouble for people.

Who am I?

My name is Al. My school attendance was irregular. I'm what they call a high school dropout, even though my IQ is about 112. My teacher said I was pleasant, even tempered, easy going, however, I seem to have a poor self concept. My eyes bother me a lot. The doctor said I have a muscular weakness in my eyes. It bothers me a little, because I like to read a lot.

Who am I?

ANSWERS: Thomas Edison, Albert Einstein, Eleanor Roosevelt, Abraham Lincoln

ASSIGNMENT: Copy the sentence provided on the next sheet of paper. Be sure to use your VERY BEST penmanship following the directions given you you by the Instructor.

(INSTRUCTOR: Direct the participants to use their LEAST dominant hand to complete the assignment. [i.e. if they are right handed, they should write with their left hand.] Ask the participants to sit on their dominant hand so that they cannot use it to steady the paper.)

I will write
my papers very
neatly and I
will not
make any
mistakes.

DIRECTIONS FOR THE INSTRUCTOR:

1. Ask participants to get out a blank (scrap) sheet of paper and a pencil or pen.

2. Give participants the following directions:

   Sit on the edge of your chair.

   Do NOT rest your back against the back of the chair.

   Lift up both feet about 6 inches from the ground.

   You are now going to take a timed test. You have two minutes to complete the assignment.

   (If available, use an egg timer that has a loud ticking sound. If an egg timer is not available, make continuous reference to the time remaining while the exercise is being completed.)

   Neatness and correct answers count on this test. (Emphasize these points.)

   You are to write the eight multiplication tables including the answers. You have two minutes to complete the test. Be sure and put your name on your paper.

   Start now. (The Instructor should walk around the room making comments such as:)

   "Bill, erase that paper and start over. Your work is not neat enough."
   "Mary, you had better hurry. There is only one minute left."

3. When time is up, let participants relax. Ask them how they felt during the exercise. Discuss the fact that many students with physical impairments do not have "body in space" balance making it difficult to concentrate on a task.

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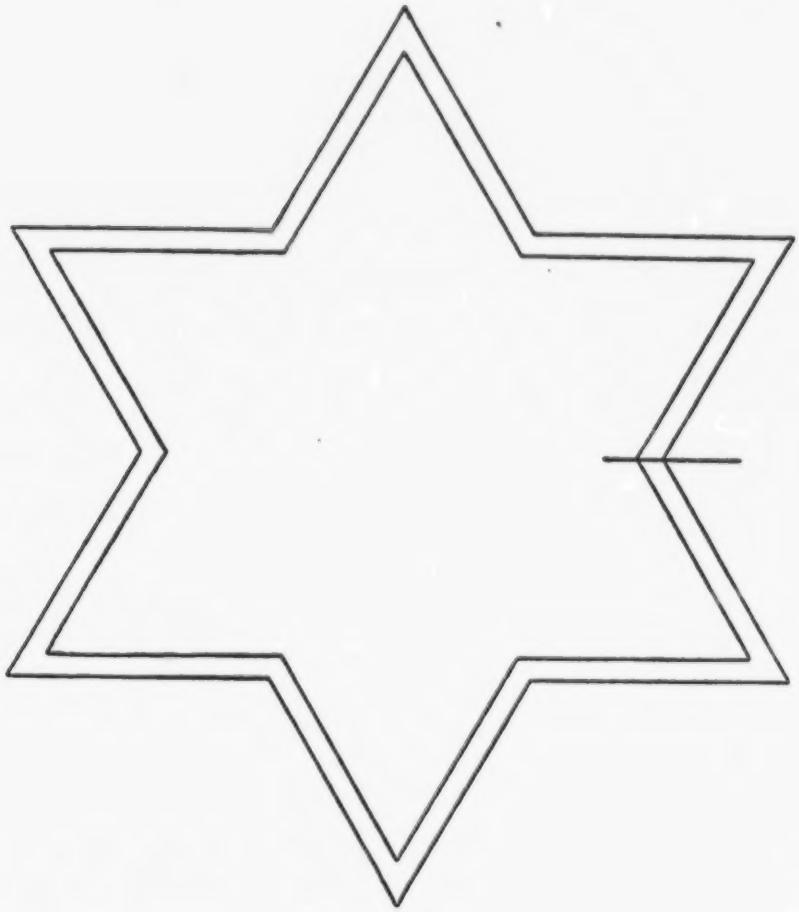
SIMULATION OF VISUAL MOTOR DYSFUNCTION

There are a number of activities that can help participants EXPERIENCE what it feels like to have learning disabilities or visual motor dysfunctions. One of them is the Whipple Test which requires a person to draw a pencil line in-between the two lines that form the outline of a star WHILE LOOKING THROUGH A MIRROR. The Whipple Test is produced by C. H. Stoelting Company, Chicago, Ill.

Another variation is to ask a participant to read a paragraph from a book while looking at the paragraph in a mirror.



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BUT I KNOW I CAN AND I'VE TRIED SO HARD

INTRODUCTION

Many people cannot use their hands very easily. Some of these people have physical handicaps. Others have learning disabilities. Both have trouble doing any task that requires good muscular control. The hands of the physically handicapped are often stiff and sore. This makes it difficult to pick up things. Writing is very hard because the pencil has to be held so tightly. They cannot get their hands to do what they want and may seem clumsy. Their grip is not as strong as yours.

Some people with learning disabilities have these problems, too. Often they have trouble getting their eyes and hands to work together. This causes them to have trouble doing school work. It is hard to write. They cannot stay on the lines and many of their letters are not made correctly. These people have trouble in physical education and art classes because so much of the work requires them to use their hands well. But many of these students take these classes and do the work. The classes are not easy for them and require a lot of extra energy. Sometimes they get upset with themselves because they try so hard and things don't always work out.

The activities in this folder will let you feel some of the frustrations that these people feel every time they use their hands.

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NEW WORDS

clumsy
control
disabilities
frustrations
grip
handicaps
hands
learning
muscular
nondominant
physical
stiff
trouble
writing

MATERIALS

partner
blank paper
pencil
scissors
banana split ditto
from the teacher
textbook
pair of heavy gloves

DIRECTIONS

Activity #1

1. Find a partner.

2. Take a copy of the picture. You and your partner will both need a copy.

3. Get a pair of scissors.

4. Cut out the picture using your nondominant hand.
Your nondominant hand is the hand that you usually do not use to write with.

5. Do your best to do a good job. Please complete the task.

6. Display your work on the chalkboard.

DIRECTIONS

Activity #2

1. Take a piece of blank paper and a pencil.
2. Try writing a paragraph from your textbook with your nondominant hand. Have your partner keep track of the time it takes you to complete the task.
3. Now write the paragraph using the hand you usually use when writing. Have your partner time you while you do this.
4. Compare the two times.

Activity #3

1. Put on the gloves.
2. Try writing your name and address on the chalkboard.
3. Tie your shoes or buckle them with the gloves on.
4. Try picking up buttons, pieces of chalk, or change from your pocket.
5. Try to cut along the straight line of your lined paper without making a mistake.

ANSWER THESE QUESTIONS WITH YOUR PARTNER

1. Which task was the most difficult?
2. How did you feel doing your work?
3. Why did you feel that way?
4. How did you feel showing others what you had done?
5. Did you have to wait while others finished? How would you feel if you always finished last?
6. Do you know anyone who may have trouble getting his/her hands to work like he/she wants?
7. Name some things that person can do well.
8. What are some things that you can do to help a person who might have a problem like this in doing his/her school work?
9. Did you get tired when you were having trouble?
10. Were you trying to do your best?

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A MIDNIGHT WALK

INTRODUCTION

A blind person could not read this card. However a partially-sighted person might be able to if he/she used a magnifying glass. Blind people can read by using Braille. Braille is a system of raised dots that stand for letters and numbers. Partially-sighted people usually are able to read larger print. Both of them listen to tapes and use typewriters to do their work. They also use aids like talking calculators and the abacus.

Blindness can be caused by an injury or disease. However some people are born blind. One important skill a blind person needs to learn is how to move around safely. Many people use a sighted guide while others use aids such as white canes and Seeing Eye dogs.

When talking to blind people, call them by their name. It's OK to say words like "see" or "look" around them. Ask them if they need help before giving any to them.

These activities will let you feel what it is like to be blind. You will also have a chance to practice the skills of guiding someone who is blind. This skill may come in handy someday.

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NEW WORDS

abacus
blind
blindfold
Braille
disease
injury
larger print
magnifying glass
partially sighted
system of raised dots
talking calculators
typewriters

MATERIALS

partner
blindfold

DIRECTIONS

Activity # 1

1. Find a partner.
2. One person will be the sighted guide. The other person will wear the blindfold. He/she will feel what it is like to be blind.

   Both of you need to read the sighted guide directions below:

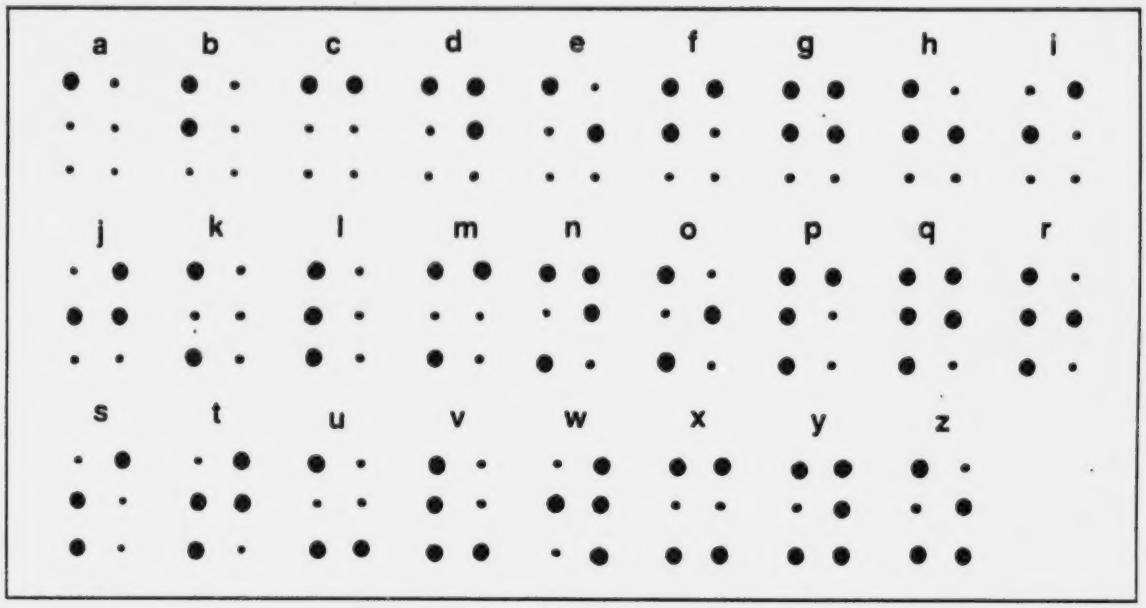
> **HOW TO BE A SIGHTED GUIDE**
>
> The blindfolded student should take hold of the helper's upper arm. His thumb should be on the outside of the guide's arm. His fingers should be on the inside of the guide's arm.
>
> Both students should hold their upper arms close to their own bodies. The blindfolded student stands a little behind his helper.

3. Here are a few activities to try:
   a. Get a drink of water.
   b. Walk up and down some steps.
      Try it with your helper. Try it by yourself.
   c. Touch materials on your desk. Try to name what you touched.
   d. Write your name and address on the chalkboard.
   e. Write your name on a piece of paper you take from your binder.
   f. Do your own thing. The guide should remember to help the partner so he/she doesn't get hurt.
4. Change places with each other.

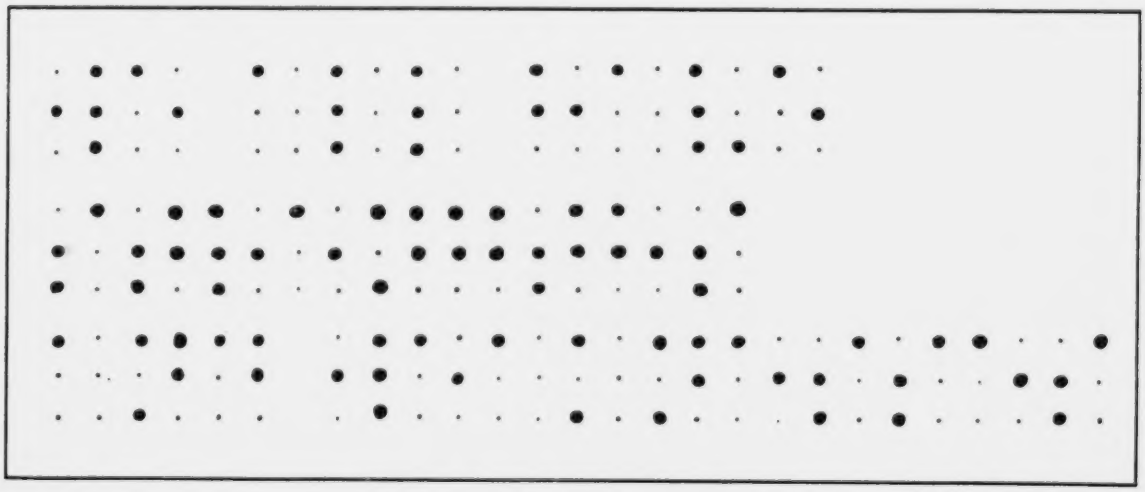
DIRECTIONS

Activity #2

1. Try to use the Braille alphabet chart below.



2. What does this say?



3. Write a note to your partner using the Braille patterns.

ANSWER THESE QUESTIONS WITH YOUR PARTNER

1. How did it feel to be blind?
2. How did it feel to have to depend on another person?
3. What senses did you use and when?
4. What was it like to be a guide?
5. Do you know anyone who is blind or who has a visual problem?
6. Have you ever seen a blind person use a white cane? How did he/she use it?
7. Do you think reading Braille would be hard to do?
8. Which activity was the hardest to do?
9. How can you help someone who is blind?
10. How could a blind person help you?

Answer to page 3: We all have strengths and weaknesses.

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JUST CAN'T SAY IT

INTRODUCTION

There are many types of speech and language problems. A common one is stuttering. A person who has this problem repeats sounds and words when there is no need. Another problem occurs when a person adds, omits, substitutes, or says sounds that do not belong in the word. An example would be when the person says "mudder" for "mother"

Some people have voice problems. They sound like they are talking through their noses. Their voices may sound raspy or harsh. It may sound like they are hurting as they talk. It is hard to understand them sometimes.

Speech is so important in our daily life. It is understandable that someone who has trouble talking could become embarrassed and/or frustrated. This is true when they are laughed at or not listened to.

Many speech problems are corrected with special help. Both children and adults can learn to speak better by taking speech lessons from a speech therapist. You can help these people by listening patiently when they talk. It is also important to let them finish their sentences. Another thing you can do is to help them feel relaxed when talking to you. Show them that you care about what they have to say.

You will be doing activities that will help you know what it is like to have different speech problems.

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NEW WORDS

articulation
corrected
embarrassed
frustrated
harsh
language
problems
raspy
speech
speech therapist
stuttering
substitutes
types
understandable
voice

MATERIALS

partner

DIRECTIONS

Activity #1

1. Find a partner.

2. One person will read the set of sentences below. Read these sentences with your tongue touching the roof of your mouth.

SAY HI

Sometimes it's hard to hear
Especially when you are there
And I am over here.

So come a little closer
Look me in the eye,
Smile and say "Hi!"

3. The other person will read the passage below. Remember to read the sentences with your tongue touching the roof of your mouth.

A friend is someone who talks to you
and listens.
Who makes you laugh
When you are blue.

A friend is someone who's always there,
Someone to share with
And someone to care.

by Jane Brucker

People who talk like this have articulation problems. It is very difficult for them to speak clearly.

DIRECTIONS

Activity #2

1. Both partners should read the following passage:

> A-a-a-a s-s-sp-peech p-p-problem is not a f-f-funny t-th-thing. It c-c-can b-b-be v-v-very u-u-up-s -s-setting t-t-to th-th-the p-p-person who is t-t-talking.

This person has a stuttering problem.

Activity #3

1. Take turns reading and explaining these sentences:

> Trouble speech not funny. No laughing this is. Talk feel, hurt, sad, mad. Not know any words. Trouble listening for you.

2. This person has a language problem. He knows what he wants to say but cannot get all the words out in the correct order.

3. Here is what this person is saying:

> It is not funny that I cannot speak very well. Don't laugh at me. When I talk, I feel hurt, sad and mad. I cannot say all the words that I need to say. I know you have trouble listening to me.

ANSWER THESE QUESTIONS WITH YOUR PARTNER

1. Did you understand what your partner was saying?
2. Who do you think had the most difficulty — the speaker or the listener?
3. How might you react if every time you said something the listener didn't understand?
4. Do you know anyone who has a speech problem?
   What type of problem do you think it is?
   Articulation? Stuttering? Or a language problem?
5. Is there a speech therapist in your school?
6. Did you have any trouble learning to talk when you were growing up?
7. How can you help someone who stutters?
8. Why shouldn't you finish sentences or words for people who stutter?
9. How would you feel if someone laughed at you because you couldn't talk correctly?
10. What could you do to help a person with a speech problem?

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I CAN GET WHERE I AM GOING

INTRODUCTION

Many people have physical handicaps. They have problems with their muscles, joints and bones. Some children are born with these problems. Other problems were caused by diseases. A person who has a broken leg or arm is not handicapped because the problem is not permanent. There are many types of physical handicaps. Cerebral Palsy, amputations, birth defects and Muscular Dystrophy are a few of the most common types. Diabetes, Asthma and Epilepsy are also physical problems.

People with physical handicaps, like a loss of a leg, often have trouble moving around. They use wheelchairs, crutches, walkers and/or braces. Some wear artificial limbs. These aids help them take care of themselves. They also provide them with support. It is difficult to learn to use these aids. Simple jobs for you might take more energy and effort for physically handicapped people to do. They also get tired more quickly. Many times they are in pain and do not feel well. However they can do almost anything you can do.

One of the activities you will be doing will give you a chance to feel what it is like to wear braces. The other activities will let you feel what it is like not to be able to use your hands and legs.

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NEW WORDS

amputations
artificial limbs
Asthma
bandages
birth defects
braces
Cerebral Palsy
crutches
Diabetes
diseases
Epilepsy
joints
Muscular Dystrophy
muscles
permanent
physical handicaps
wheelchairs

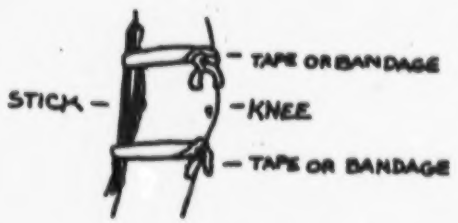
MATERIALS

partner
two sticks per person
masking tape or two Ace bandages
chair
wastebasket
ball
sweater or jacket

DIRECTIONS

Activity #1

1. Find a partner. Each of you will do this activity at the same time.
2. Help each other put a stick behind each of your knees.
3. Your legs should not be able to bend.
4. Hold the sticks in place with masking tape or Ace bandages. See drawing below:



5. Try these activities:
   a. walk around the room.
   b. sit in a chair.
   c. get out of the chair without help.
   d. walk up and down stairs.

DIRECTIONS

Activity #2

1. Sit in a chair.
2. Tape your ankles together with tape or a bandage.
3. Do the following things without moving out of the chair. Try not to move the lower half of your body.
   a. Try to throw a ball into a wastebasket. The basket should be at least five feet or more away from you.
   b. Throw the ball five times. Count how many baskets you make.
   c. Now let your partner try.

This is what it is like to be in a wheelchair. Maybe your class can borrow a wheelchair and see what it is like to use one.

Activity #3

1. Have your partner tape your fingers together on your right hand.
2. Use that hand to do these things:
   a. Pick up a pencil.
   b. Write your name.
   c. Put on a sweater or jacket.
   d. Take off your sweater or jacket.
   e. Try to carry your school books.

ANSWER THESE QUESTIONS WITH YOUR PARTNER

1. What was the most difficult thing to do while wearing the braces?

2. Were you able to do each task?

3. How did you feel about having others watch you?

4. How do you think most people react to people who wear braces? Why?

5. Were you tired after wearing the "braces"?

6. Have you ever had a broken bone? Did you have trouble doing things you did easily before the accident?

7. Tell some things people with physical handicaps can do well.

8. What could you do to help a person who has a physical handicap? (Don't forget that they need to do things for themselves.)

9. When one part of your body couldn't be used, did you use another part to get the job done?

10. Have you ever tried to drive a wheelchair? Have you ever talked to someone in a wheelchair?

FDLRS/Tech, Merritt Island, prepared a number of computer station simulations that could be used with participants in a computer lab workshop. The activities could also be presented by selecting volunteers to demonstrate on one computer to a larger group. A sampling of the activities is reproduced below.

NOTE: Specific software titles are suggested for each activity, however, other software titles can be substituted. Be sure to change the DIRECTIONS to correspond to the selected software program.

NOTE: The directions given for each activity assume that the computer station has already been equipped with any special devices required to run the software. The directions also assume that these devices have been installed and are ready for use.

The complete set of activities is available at the FDLRS Center in your District, or you may send a request for the Sample Software Program Station Cards to:

Janeen Clinton
FDLRS/Alpha
Cedar Square Building
2112 S. Congress Ave., Ste. 203
West Palm Beach FL 33406

****

PROGRAM: Muppet Learning Keys
Sunburst

ACTIVITY: You are a kindergarten student who lacks some fine motor skills and require a large keyboard. You need experiences in letter and number matching.

DIRECTIONS:

1. Boot the software and choose from the non-reader menu by pressing Go when the arrow points to the program you wish to use.
2. Choose Discovery. When the empty stage appears, press any letter on the keyboard. Then, choose a number and a color.
3. Next, press Go.
4. After you've finished Discovery, choose Letters or Numbers.

NOTE: The keyboard plugs into the rear of the IIe (joystick port).

PROGRAM: Story Machine
Spinnaker Software Corporation
215 First Street
Cambridge, Massachusetts 02142

ACTIVITY: You are a fourth grade student who is hearing impaired. You have been practicing writing sentences a lot in class, but you think it's a lot more fun to work on the computer.

DIRECTIONS:

1. Boot the disk and answer the questions on the screen.
2. Press 1 to write a story.
3. Type the following:

   The boy dances to the flowers. The Bumpus is at the fence. The Bumpus zots the flowers.

4. Press ESC to rerun your story.
5. If time permits, write a story of your own. Follow the rules on page 4 of the instruction booklet. Use the vocabulary on pages 6-7.

NOTE: Stories can be saved to a disk.

****

The majority of the activities developed and compiled at FDLRS/Tech simulate young children and students with learning disabilities. These activities can be further adapted to simulate students with physical handicaps as well.

1. Have participants type their name into a word processing program while sitting on their hands and using an unsharpened pencil as a pointing stick. Point the eraser end of the pencil at the keyboard.
2. Have participants run a math game that requires visual motor coordination (the DLM Arcademic software is good for this exercise) while sitting in the position described in the BODY IN SPACE activity i.e. sitting on the edge of their chair, without resting their back against the back of the chair, and holding both feet six inches off the floor.
3. Have participants wear large garden gloves or boxing gloves and ask them to operate a software program that requires keyboard access.
4. Have participants tape their fingers together or wear gloves and access a computer program using a scan activiated by a switch.
5. Have participants type a timed "creative writing" paragraph into the computer using a scan activated by a switch. Time the exercise. How many words did the participant type in the time allowed? What effect did the slow scan have on their creative though process?

The following excerpts on styles of learning were taken from the Palm Beach County Unified Curriculum.

****

Attention to learning styles is practical for all children and should be addressed regardless of the choice of curriculum. The following suggestions for utilizing visual, auditory and kinesthetic aids to enhance learning may be helpful to both the Exceptional Student Education teacher and the regular teacher.

VISUAL LEARNER

GENERAL INSTRUCTIONAL TECHNIQUES

-Face the student.
-Speak slowly and clearly.
-Use a contract system. Be sure the student sees the contract in writing and understands its terms.

TEXTBOOK READING MATERIAL

-Visual learners will learn best from materials they see and read and will profit from and easily understand the various textbook illustrations.
-If the textbook is too difficult for them to read, reading aloud will be of little value. They need to see the material. You may wish to summarize the textbook material in simpler terms on a study guide.
-An outline guide will assist them in studying the text and locating important information.
-Illustrations, drawing and graphs will help them understand information.
-Writing down notes as they read will help them understand the information.
-Underlining and circling words and terms they do not understand is advised. Take time in class to demonstrate and/or explain the terms.
-Have the students underline the main facts and concepts.

HOMEWORK AND ASSIGNMENTS

-The visual learner learns from writing. Therefore, written homework assignments will be of value to him.
-Visual learners think in pictures and images. They may easily skip words or phrases as their mind races ahead of their pencil. It may be necessary to insist on wide-lined paper in order to help the legibility of their writing. Time must be allowed for proofreading and editing errors.
-You may wish to substitute illustrations and/or other graphic representations for some of the written assignments.
-Have the students write down information and facts that they needs to know.
-Drawing pictures of steps required in a procedure would be an alternative to a written description of steps involved.
-Student presentations are best done through:
  models
  illustrations/maps and graphics
  projects
-Make sure the student writes down all assignments that are given.
-Give graphic examples of what to do; they may not be able to retain verbal instructions.

CLASS DISCUSSION/CLASS WORK

-Visual learners will best show you how a problem is to be solved. They may be unable to participate in a class discussion that involves problem solving.
-They may benefit from having a written example that they can follow during class discussions.
-Visual learners will profit very little from classroom discussions and lectures unless they have taught themselves to be careful note-takers, which is rare among school-age students. Auditory information will simply not be retained by this type learner. As a teacher, you will need to present well-organized notes for your lecture, and do a careful summary, in writing, of all class discussions. (The overhead can be a useful tool for this approach.)
-Taking notes from the chalk board or overhead will help this type learner.

EQUIPMENT

-Visual learners will profit from all additional visual input. They will benefit from using filmstrips, movies, transparencies, language master, and computers.
-Visual learners may get more information from a film or filmstrip than you do. Their attention to detail can amaze you. However, the sound track of a film will be of little value to them.
-Chalkboards, maps, charts, graphs, pictures, posters, and flashcards will also benefit the visual learner.
-A calculator may provide a visual stimulus to help this type student learn math facts.

COMPUTERS

-Select software programs that have vivid, colorful, clear graphics and text.
-The visual learner can frequently excel in the use of software programs that provide visual clues and stimuli such as academic games that use an arcade format with multiple visual stimuli.
-The visual learner can frequently read and follow directions given on the screen.
-The visual learner is not inhibited by the clutter of the keyboard arrangement.
-The visual learner can use word processing software effectively to write, edit and print assignments. If the student is an efficient touch typer, his/her written output can keep up with the 'visual images' he/she conceptualizes while writing.
-Tool software that allows the visual learner to make flash cards, outlines, calendars and other instructional aides will be beneficial.
-Prepare a worksheet that follows the sequence of the software program and requires the student write answers to questions from text presented on the screen.

GENERAL INSTRUCTIONAL TECHNIQUES

-Make sure the student can hear you.
-Allow the student to verbalize.
-Read aloud.
-Point things out verbally.

TEXTBOOK READING MATERIAL

-The auditory learner needs to hear the concepts and information presented. Be sure he/she has verbal reinforcement for any new skill or concept.
-Tape instructions and texts to go along with the textbook.
-Teach the auditory learner to verbalize the questions in the textbook before writing the answer.
-Have the student read aloud into the tape recorder or to another student.

HOMEWORK AND ASSIGNMENTS

-Ask the student to repeat the homework assignments to you verbally before leaving class for the day.
-They will need verbal reinforcement of written materials. They may have difficulty writing, so written notes may not be an effective study aid.
-Use oral and taped reports as an alternative to the written report.
-Shorten written assignments for these students.
-Suggest oral reading of assignments and textbooks at home.

CLASS DISCUSSION/CLASS WORK

-The auditory learner will do well in learning from lectures and class discussions. He/she often can learn more by listening and taking few notes.
-The student may have difficulty copying notes and assignments from the chalkboard or overhead. Provide the information at the student's seat.
-Make sure this student is not distracted by other auditory stimuli during class discussions. The seating arrangement is important.
-Visual aids may not be helpful and could confuse the auditory learner.

EQUIPMENT

-Use sound movies, language masters, tape recorders, cassettes, records and books with cassette tapes.

COMPUTERS

-Use computer software programmed with speech synthesis.
-Use talking word processing programs.
-Select software programs that have sound effects as well as visual images.
-Provide cassette tapes to accompany programs that have a great deal of the information displayed in text.
-Provide cassette tapes to reinforce orally the screen directions for using the software.
-Have the auditory learner read the screen text outloud.
-If a work sheet is prepared to accompany the text on screen, include references to the work sheet in the cassette tape made to accompany the program.

KINESTHETIC LEARNER

GENERAL INSTRUCTIONAL TECHNIQUES

-Allow the student to actively participate by "doing" as much as possible.
-Use concrete, three-dimensional materials.
-Provide follow-up to basic instruction using role playing, puppets, drama, simulation activities, and project building.

READING MATERIALS

-Use everyday materials such as TV Guides, newspapers, magazines, telephone directories, catalogs etc. to teach reading and curriculum content.

HOMEWORK AND ASSIGNMENTS

-Assign real life activities when possible or use assignments that capture the student's interest.
-Oral reports with projects or action are most appropriate.
-Hands-on projects, models or construction may be used in place of written assignments.

CLASS DISCUSSION/CLASS WORK

-Use choral reading and pantomines or dramatic scenes in history.
-Lab experiments or demonstrations in science, art, music and math will benefit this type learner.
-Consider activities using body movement or pantomine to illustrate comprehension of reading materials.

EQUIPMENT

-All types of audio-visual equipment will appeal to this student especially if he/she can operate himself/herself.
-Encourage these students to use the typewriter.

COMPUTERS

-All types of computer activities will benefit this student.
-This type student benefits most by doing a activity. When coupled at the computer with another student, this student will learn best while using the keyboard to control the software.
-This student will keep using a software program until able to figure it out. He/she may not bother to read the program directions, but will forge ahead, trying different key combinations until the software reacts.
-This type student will benefit from word processing and tool software that he/she can manipulate for practical applications.

No matter what style(s) a student uses to learn or what method of instruction a teacher selects, the proper atmosphere and environment is required to optimize a learning experience.

****

-Outline the learning that will take place.

Today we are going to use a software program to.....

-Review the skills and information needed to complete the assignment.

This software program relates to the lesson we had yesterday. Let's review....

-Create a climate of goal expectation.

When you are finished in the lab you should be able to....

-Enhance the computer experience.

When you get to the computer, you will find a folder that identifies:
the software program you are to use.
a list of the commands you will need to run the software.
a list of the special function keys that run the software.
a vocabulary list that will help you type the correct answers into the program.

-Qualify the software

When you use this software program, take note of a very important fact. Yesterday we practiced addition. When we added 9 + 9, we wrote the answer 1 and 8 for eighteen. In this software program, you must type in the answer for the ones column, then the tens column so you would type the eight and then the one. Lets practice it together so that you do not make any mistakes on the computer.

-Transfer the skill to another form

When you have finished the software on volcanoes, read about volcanoes on page 89 in your science book. Answer the questions on this work sheet. The answers are found in both the textbook and the software program.

-Summarize or review the information

Let's go over the work sheet you completed while using the software program...

-Test the information

Yesterday you used a software program that helped you find the noun in a sentence. Let's see how well you learned....

LEAST RESTRICTIVE ENVIRONMENT

TASK FORCE

FOR THE

PHYSICALLY IMPAIRED

Transition Procedures

(Note: The format of this document has been compacted for reproduction In this handout)

April 1989

DRAFT
For Discussion Only

LEAST RESTRICTIVE ENVIRONMENT

TASK FORCE

FOR THE PHYSICALLY IMPAIRED

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Lake Worth High School

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TABLE OF CONTENTS

Page

Task Force Membership List

Ad Hoc Membership List

Mainstreaming Procedures

- o Introduction
- o Referral
- o Eligibility
- o Placement

Mainstreaming Task Responsibility Matrix

Out Of District Transfers

Out of District Task Responsibility Matrix

Appendices

A Federal LRE Policy
B State LRE Policy
C Student Special Needs Profile
D IEP Information Related to LRE
E Questions/Answers for the School
F Questions/Answers for the Teacher
G General Recommendations
H Supplies/Materials in Stock at Warehouse
I Student Bathroom Supplies

Introduction*

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DRAFT

Assurance of the Least Restrictive Environment (LRE) for Physically Impaired students, as well as all handicapped students, is mandated under P.L. 94-142 EHA and accompanying Florida Statutes. (See Appendices A and B)

When considering the LRE for a physically impaired student an increasingly frequent consideration is the full time placement in a regular education program. With the decision to mainstream the Physically Impaired (PI) student, the center will demonstrate successful mainstreaming in their regular program for at least one semester before considering alternative site placements.

Once success has been demonstrated then consideration should be given to placement in the closest cluster site or the SAC school whichever is deemed appropriate.

In reviewing the placement process currently used for these students, it became apparent that there is a need for a more organized and, therefore, a more consistently applied set of procedures. These procedures allow for all appropriate steps to be taken and persons to be involved while assuring, as much as possible, that the student will be academically and socially successful in the new placement.

In an attempt to maintain consistency with current district terminology the proposed LRE procedure is divided into the following three phases:

1. REFERRAL
2. ELIGIBILITY
3. PLACEMENT

Each phase requires the involvement of various schools, area and district level professionals, as well as the student in question and his/her parents.

The implementation of each phase will require the collection and review of specific information necessary to determine if the new regular school placement is the least restrictive environment for that student.

PHASE I

REFERRAL

1. Student is referred to the Child Study Team (CST) at his/her current placement by:
   - o School Administration
   - o Parent
   - o Teacher
   - o Other

2. Complete Student Special Needs Profile with help from School Board Exceptional Student Education (ESE) designee. (See Appendix C)

3. The CST discusses the referral considering the following:
    - o Current academic level of functioning
    - o Current communication ability
    - o Current related services needs
        - oo Speech Services
        - oo Occupational Therapy Services
        - oo Physically Impaired Services
        - oo Hearing Impaired Services
        - oo Visually Impaired Services
        - oo Adapted Physical Education Services
    - o Current status of other handicapping conditions
    - o Student's ability to function in the unified curriculum framework

    The FOCUS must be on the student's ability to successfully function in the academic program while considering the availability of reasonable related services and specialized media, materials and equipment.

4. The parent(s) should be involved either by written or verbal notification or by a status update of the first CST meeting.

5. The CST will then meet with the area, district, and project (FDLRS) related services specialists, the Low Incidence specialist and others, as needed, to consider the following:
    - o The projected level of academic success in the mainstream
    - o The extent of related services available in the mainstream to meet the student's educationally related needs
    - o The need for additional or updated assessments
        - oo Psychological
        - oo Medical (i.e. medication, evaluations, etc.)
        - oo Communication
        - oo Academic

6. Invite the appropriate receiving school (home school or a cluster site) representatives to the meeting and:
    - o Review all previously gathered information
    - o Consider the possible transition of the student in question

7. Update parent (s) on progress of mainstream consideration. (This should be the latest time in this phase when parents are involved.)

    Parents should be involved prior to this, based upon the referring school's discretion.

PHASE II

ELIGIBILITY

This phase is the most extensive. It will require a great deal of specific student need investigation, fiscal and human resources assessment and the beginning of many logistical considerations.

The tasks to be undertaken in this phase are listed under headings denoting responsible agents.

REFERRING SCHOOL

1. Related Service Needs:
   - o Determine, with area and district specialists, the extent of service needs to be provided the receiving school. Services to be reviewed include:
     - oo Occupational Therapy
     - oo Physical Therapy
     - oo Speech/Language/Hearing
     - oo Adapted P.E.
     - oo Visually Impaired Services
     - oo Physically Impaired Services
     - oo Hearing Impaired Services
     - oo Other
   - o Determine if needs and current services are too great to be provided at receiving school.

2. Communications Needs:
   - o Determine if student has sufficient communications skills to function in the mainstream.
   - o Determine his/her communication needs (i.e., need for special material, technology, communication evaluation (ACCES/CSES).
   - o Determine training needs for student and staff.

3. Equipment/ Software Needs:
   - o Determine specific equipment needs: This may necessitate a visit with the student, the referring therapist and the district therapist prior to submitting a request for specific items to area office.
   - o Determine, along with receiving school, what equipment, if any, must be available before students enter new school.
   - o Determine if and when training will be available regarding new equipment and who will provide it.

RECEIVING SCHOOL

4. Accessibility Needs:
   - o Determine student's accessibility needs, not just adherence to ANSI standards.
     - oo Contact Facilities Planning for an on-site review/ analysis and cost estimate to make school accessible.
     - oo The following specialists should be invited to accompany the facilities planning on-site review.
       - o Area Office representative
       - o Principals
       - o Specialist familiar with the student
     - oo Determine if renovations need to be completed before the student enters school.

ESE AREA OFFICE

5. Transportation:
   - o Determine need for special transportation.
   - o Arrange transportation.
   - o Inform parent of arrangements.

6. Paraprofessional Assistance:
    - o Determine student's need for paraprofessional assistance using **Student Special Needs Profile.**
    - o Determine level of paraprofessional assistance.
    - o Determine fund source.
    - o Assist receiving school in initiating paraprofessional request.

7. Training Needs:
    - o Determine training needs for the following: (i.e. characteristics of specific handicaps, toileting, liability, etc.).
        - oo receiving teacher
        - oo aides
        - oo students
        - oo staff
        - oo others
    - o Determine inservice timeframe and location.
    - o Assist receiving school in obtaining training.

8. Determine fund sources and monitor purchasing procedures involving the following needs:
    - o Communication
    - o Equipment
    - o Accessibility

JOINT RESPONSIBILITY

9. Curriculum Needs:
    - o Determine curriculum adaptations needed for the unified curriculum with area specialists from exceptional and regular education.
    - o Determine how academic progress is to be assessed.
    - o Determine how grades are to be assessed.

10. IEP Development:
    - o Jointly considered by
        - oo Parent(s)/Guardian(s)
        - oo Area Specialist
        - oo Referring School
        - oo Receiving School
        - oo District Specialist
        - oo Others

11. Material Needs:
    - o Determine student's need for special materials.
    - o Order materials.

12. Supply Needs:
    - o Determine special supplies that may be necessary.
    - o Order supplies.

PARENT(S)

13. Meet with referring/receiving school and others to discuss student's needs.

14. Participate with educational personnel in reviewing student's needs, ability to succeed in the regular academic program and ability to communicate successfully.

15. Participate in the decision to move the student to the mainstream school.

16. Participate in the IEP development.

PHASE III

PLACEMENT

The placement phase is a culminating activity involving the review of all reports and other information by both the referring and receiving schools, area ESE staff and the parent(s). If this review indicates that the student would be able to succeed academically in the mainstream on a full-time basis, a new IEP will be developed and the student will first be main- streamed in the center school's regular program. Upon one semester of successful mainstreaming, placement at other sites will be considered.

1. Collect and review all information gathered during the ELIGIBILITY phase such as:
   - o Reports
     - oo Student Special Needs Profile
     - oo Facilities Planning
     - oo Equipment
     - oo Related Services
     - oo Communication Needs
     - oo Materials Needs
     - oo Supply Needs
   - o Other Information
     - oo Training Components
     - oo Paraprofessional Needs
     - oo Other ESE Training
     - oo Emergency Plans
       - ill teacher
       - paraprofessional absent
   - o Determine if the student can succeed academically in the mainstream with available assistance.
   - o Determine if student can communicate effectively, with regular staff in the mainstream.

2. Conference will be held with appropriate staff and parent (s) to discuss results of information review. Persons to attend should include:
   - o Parent (s)
   - o Student, if appropriate
   - o ESE area staff, area specialists and physically impaired specialist
   - o Referring school representative
   - o Receiving school representative
   - o Student's guidance counselor
   - o Student's OT/PT specialists
   - o Others as appropriate

3. If the decision is made to mainstream full-time, a new or updated IEP is completed to reflect the student's new program.

4. Parent (s) and student are told when they can begin the new program.

5. Full time mainstreaming in the centers' regular program for at least one semester.

6. Placement at cluster or SAC school, as appropriate, after successful center mainstreaming.

FOLLOW UP

Receiving school will monitor student's progress carefully at least at each nine (9) week marking period. The student's progress should be reviewed in relation to both pupil progression requirements and his/her I.E.P.

GENERAL RECOMMENDATIONS TO BE CONSIDERED IN IMPLEMENTING LRE FOR PHYSICALLY IMPAIRED STUDENTS

There is a need for:

1. A continuum of services from Pre K through High School.
2. Clustering for efficient use of human and fiscal resources.
3. Back-up teachers and aides to be trained in case regular teacher and/or aide are unavailable.
4. A Low Incidence specialist at the district level.
5. An informal newsletter for teachers serving Physically Impaired children.
6. A computertized pool of equipment with separate property records for ESE to track.
7. Some type of incentives for teachers who teach Physically Impaired students in the mainstream.
8. Hiring Practice for Aides which emphasizes:
   a. the possibility that a teacher or aide may work with Physically Impaired students.
   b. That toileting of these students will be a necessary task.
9. A question and answer information sheet about Physically Impaired students.
10. School based training.
11. Some trade-offs for mainstream teachers with Physically Impaired children - i.e., one to four less students in class then average.
12. A basic list of supplies/materials on hand at the warehouse for ready distribution to receiving schools.
13. The availability of ongoing consultation for mainstream teachers with area and district Exceptional Student Education and regular staff.

STUDENT SPECIAL NEEDS PROFILE

Can be completed by:

- o Area Specialist
- o Physically Impaired (PI) Specialist

An adaptive behavior assessment may be done in conjunction with this instrument.
Uses:

- o Determine related services needs.
- o Use in transition from one level to another - Elementary - Middle - High School.
- o Use to determine need for mainstreaming effort.
- o Use to document 0 minutes for PI students in regular population.
  - oo This instrument should be addressed in the Special Procedures and Policies document.
- o Determine need for, and level of, tutor/companion.

This profile should be used only by school personnel with all information gathered in terms of the student's needs in the educational setting only.

TASK RESPONSIBILITY MATRIX

Tasks		Agent: Referring School Admin.	CST	Receiving School	Area Specialist ESE	Parent	Occupational Therapist	Physical Therapist	V.I. Specialist	H. I. Specialist	P.I. Specialist	Low Incidence Therapist	Facilities/Planning	Psychologist	Others
Referral															X
1	Referral	X				X									
2	SSNP				X						X				
3	CST		X												
4	Parents					X									
5	Conference		X		X		X	X	X	X	X	X		X	X
6	Receiving School	X	X												
7	Update Parent	X	X												
Eligibility															
1	Related Services		X				X	X	X	X	X	X		X	X
2	Communications		X									X			X
3	Equipment/Software	X	X									X			X
4	Accessibility	X		X	X								X		
5	Transportation														
6	Paraprofessionals		X		X						X				
7	Training Needs	X	X		X										
8	Funds				X										
9	Curriculum Adapt.	X		X								X			
10	IEP	X		X	X	X	X	X	X	X	X	X		X	X
11	Materials		X	X	X	X	X	X	X	X	X	X		X	X
12	Supplies		X	X	X	X	X	X	X	X	X	X		X	X
13	Parent Meeting		X	X	X	X	X	X	X	X	X	X		X	X
14	Review Needs		X		X						X	X			X
15	Move Decision		X	X	X	X									X
16	IEP Development					X									

TASK RESPONSIBILITY MATRIX

Tasks	Agent: Referring School Admin.	CST	Receiving School	Area Specialist ESE	Parent	Occupational Therapist	Physical Therapist	V. I. Specialist	H. I. Specialist	P. I. Specialist	Low Incidence Specialist	Facilities/Planning	Psychologist	Others
Placement														
1 Collect/Review		X												
2 Conference	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3 IEP	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4 Parent Informed	X	X												
5 Successful Mainstream	X	X			X	X	X	X	X	X	X			
6 Placement/Other site	X	X	X	X	X	X	X	X	X	X	X			
Follow-Up			X		X	X	X	X	X	X	X			

OUT OF DISTRICT TRANSFERS

These procedures should be followed for those physically impaired students who transfer to Palm Beach County from another Florida district or from another state particularly in the event the family does not or cannot provide the district with sufficient lead time to allow for adequate advanced planning for a smooth transition.

Families planning to move to Palm Beach County should make their plans known to the Exceptional Student Education Area Administrator at least one semester prior to their arrival. The families should provide all educational and medical information to the Exceptional Student Education Area Administrator. This data, along with their new local address, and sufficient lead time would allow the district to carefully plan for its new student.

1. Parents should register their child in their (SAC) home school.

2. The home school should take the following action steps:

   (a) Receive copies of student's medical and educational records from the parents, if available.
   (b) Have parents sign releases (PBSD 0313) for any/all information not currently available.
   (c) Send releases to appropriate recipients requesting the additional information necessary to make an appropriate educational placement for the student.
   (d) Have parents sign consent to evaluate forms (PBSD 0297) if appropriate.
   (e) Contact your ESE Area Office to arrange for a meeting with the parents, the student and area specialist(s).
   (f) Provide the ESE Area Office with a copy of all information obtained from the parents.
   (g) Put student on the Child Study Team (CST) agenda for review. (See #4 below for specifics.)

3. The Exceptional Student Education Area Office will:

   (a) Meet with parents and student.
   (b) Review available student records.
   (c) Determine if family has local, Florida Medical Doctor (This is necessary if PT or OT services are to be legally provided to the student.)
   (d) Make a phone contact with previous school to obtain additional information quickly and to urge rapid response to signed releases being forwarded.
   (e) Determine the need to make arrangements for the student to be seen by the area trained multidisciplinary evaluation team (ACCES) (i.e., J. C. Mitchell). The ACCES will forward its records to the area ESE office.

4. An area CST will convene and review all available data to determine the student's eligibility for services. (This is the **Eligibility Step**) (PBSD 0304).

   The following staff will constitute this area CST:

   (a) a home school representative
   (b) a receiving school representative
   (c) a center school representative
   (d) an ESE area representative
   (e) other specialists as needed

5. The CST will develop a preliminary IEP using the available student data detailing the student's needs. (This is the **IEP step**) (PBSD 0300).

6. This CST will use the IEP to determine if a temporary or regular placement is appropriate and make that recommendation to the area coordinator. (This is the **Placement step** PBSD 0302). Parents must be present at this phase of the CST.

7. To review data and sign consent for placement:

   (a) Temporary placement should be considered if:
      (1) an IEP from another state is available.
      (2) a legal OT/PT Rx is needed, but not currently available.
      (3) additional information is needed to make an appropriate educational recommendation.
   (b) Regular placement should be considered if:
      (1) all necessary information is available to make such a recommendation.
   (c) Placement will be in a center school unless (1) a documented CST recommendation is made to place in cluster site or home school or (2) the student has documented evidence of successful full time mainstreaming in their previous regular school site.
   (d) The CST and the area office will make their recommendation based upon the same considerations outlined in the Mainstreaming Procedures section of this document.

Out of District

Task Responsibility Matrix

	Tasks	Agents					
		Parents	Home School	ESE Area Office	CST	Others	
1	Parent Register Child	X					
2	Home School						
a	Medical/Ed. Records	X	X				
b	PBSD 0313	X	X				
c	Request Additional Info.	X	X				
d	PBSD 0297	X	X				
e	Arrange meeting		X				
f	Copy to ESE Area Office		X				
g	CST Agenda		X				
3	ESE Area Office						
a	Meet with parents/child			X			
b	Review student records			X			
c	Local/Florida M.D.	X		X			
d	Contact previous school			X			
e	ACCES			X			

Out of District

Task Responsibility Matrix

Tasks		Agents					
		Parents	Home School	ESE Area Office	CST	Others	
4	CST						
a	Home School Representative				X		
b	Receiving School Represent.				X		
c	ESE Area Representative				X		
d	Other				X		
5	Preliminary IEP	X			X		
6	Recommended Placement				X		
7	Consent for Placement	X		X	X		
a	Temporary Placement if:						
1	Out-of-State IEP	X			X		
2	Need Rx for OT/PT	X			X	X	
3	Need additional information					X	
b	Regular placement if:						
1	All information available			X	X		
c	Center school placement			X	X		
d	Decision where to place			X	X		

APPENDICES

A. Federal LRE Policy

B. State LRE Policy

C. Student Special Needs Profile

D. IEP Information Related to LRE

E. Question and Answers for the School

F. Questions and Answers for the Teacher

G. General Recommendations for Implementing LRE for P.I. Students

H. Supplies/Materials in Stock at Warehouse

I. Student Bathroom Supplies

Least Restrictive Environment

Federal Policy:

...Each state must ensure that to the maximum extent appropriate, handicapped children...are educated with children who are not handicapped, and special classes, separate schooling or other removal of handicapped children from the regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (34 CFR 300.550)

State Policy:

...In providing for the education of exceptional students, the superintendent, principals, and teachers shall utilize the regular school facilities and adapt them to the needs of exceptional students whenever this is possible. No student shall be segregated and taught apart from normal students until a careful study of the student's case has been made and evidence has been obtained which indicates that segregation would be for the student's benefit or is necessary because of difficulties involved in teaching the student in a regular class. (Section 230.23(4)(m), F.S.)

WHAT IS REQUIRED?

- **Educational services that are appropriate for each child are defined annually in an I.E.P.;**

- **An educational placement is selected from a continuum of alternatives so that...**

...the individually appropriate education can be delivered in the setting that is least removed from the regular education environment

and...

...offers the greatest interaction with children who are not handicapped.

STUDENT SPECIAL NEED PROFILE

Can be completed by:

- o Area Specialist
- o P. I. Specialist

They could also do an adaptive behavior assessments in conjunction with this instrument.

Uses:

- o determine related services needs
- o use in transition from one level to another - Elementary -- Middle -- High School
- o use to determine need for mainstreaming effort
- o use to document 0 minutes for P.I. students in regular population
  - ∞ this instrument should be addressed in the Special Procedures and Policies document
- o determine need for, and level of, tutor/companion.

*This profile should be used only by school personnel with all information gathered in terms of the students needs in the educational setting only.

STUDENT SPECIAL NEEDS PROFILE

I. SCHOOL INFORMATION

Current School _____ Principal _____
Student _____ Age _____ Sex _____
Exceptionality _____ Aide: M ____ F ____
Student Status _____
_____
_____

* * * \

- o Other: Need Description:

x's/day: _____ minutes/x: _____ Total: _____

SELF HELP TOTAL _____
Name: _____
Date: _____
School: _____

****

B. MOBILITY: Need Description:

- o Bus Loading/unloading : Need Description:

x's/day: _____ minutes/x: _____ Total _____

- o Classroom: Need Description:

x's/day: _____ minutes/x: _____ Total _____

- o School: Need Description:

x's/day: _____ minutes/x: _____ Total _____

- o Emergency: Need Description:

x's/day: _____ minutes/x: _____ Total _____

MOBILITY TOTAL _____
Name: _____
Date _____
School _____

****

C. MEDICAL: Need Description:

x's/day: _____ minutes/x: _____ Total _____

MEDICAL TOTAL _____

****

D. CURRICULUM

Academic: Need Description:

x's/day: _____ minutes/x: _____ Total _____

Communication (oral/written/other): Need Description:

x's/day: _____ minutes/x: _____ Total _____

Adapted P. E.: Need Description:

x's/day: _____ minutes/x: _____ Total _____

CURRICULAR TOTAL _____

GRAND TOTAL _____

****

Name _____
Date _____
School _____

III. ADAPTIVE MATERIAL NEEDS

- o _____
- o _____
- o _____
- o _____
- o _____

ADAPTIVE EQUIPMENT NEEDS

- o _____
- o _____
- o _____

INFORMANT(S): **POSITION(S):**

_____ _____
_____ _____
_____ _____

_____ _____
Signature of Recorder Date

IV. RECOMMENDATIONS:

_____
_____
_____
_____

_____ _____
ESE Designee Date

cc: Area Office
Referring School
Parent
Receiving School

UNANSWERED QUESTIONS

1. Is this student able to go to the bathroom independently? (i.e. Does he need catherization?)
2. Who will be responsible for helping this student whith his or her bathrooming skills?
3. Is this student a self-feeder?
4. Who will be responsible for helping this student in the cafeteria?
5. Is this student mobile within the classroom?
6. How do I position this student within the classroom and between the classroom to special area classes?
7. Does this student's curriculum need to be adapted/modified to meet his/her needs?
8. Who will assist me in making the necessary modifications in this student's educational program?
9. Does this student require PT, OT, Vision, PI or any other special services and how do I contact the appropriate people?
10. May other students assist this student within the classroom?
11. What is my liability concerning this student?
12. Who provides training in such areas as:
    - toileting?
    - ESE specifics?
    - curriculum adaption?
    - grading?
    - testing?
    - transition from:
        - grade-to-grade?
        - school-to-school?
    - others

IEP Goals for Mainstreamed Students

Specific goals related to mainstreaming physically impaired students should be in the IEP. Many times a student's only benefit in being in a mainstreamed class is through the physical placement. Many mainstreamed students are isolated in the regular class because they do their work individually with their one-on-one tutor/companion. These students need to have opportunities, stated in the IEP, to interact with other students and adults during both academic and social activities. These activities should be stated as goals in the IEP for the student to achieve as independently as possible.

The regular classroom teacher needs to be responsible for ensuring these opportunities are available and to measure their effectiveness toward achieving higher level goals related to the independent, mainstreaming process.

The regular classroom teacher will need assistance in learning techniques to achieve the goals written in the IEP.

If the student is an augmentative communication user, the above suggestions must be followed. The development of an augmentative communication system (ACS) for an individual student can entail complex evaluation and implementation procedures and strategies.

The following are general guidelines to consider when developing an IEP for the ACS user:

1. The primary goal for the ACS user should be identified. This can range from providing prerequisite communication opportunities to utilizing the communication system of choice (manual or electronic) while the student is in the school and/or home environment.
2. The role of the educational staff related to the ACS needs to be specified.
   Who is going to select and display the vocabulary?
   Who is responsible for programming the electronic device?
   Who is responsible to ensure that the ACS is being used by the student in "interactive" situations?
3. Observable goals and objectives and lesson plans are recommended to evaluate the success of the ACS for the student.
4. The specific method or type of ACS needs to be outlined so that everyone interacting with the child as a communication partner will use it consistently and effectively.
5. The staff and parents will require ongoing training to implement the goals.
6. ACS will change over time, therefore, training and goals will constantly change.
7. Examples of implementing goals related to the mainstreaming of an ACS user include:
   a. Initiating communication by the ACS user with unknown people.
   b. Computer interface with the device.
   c. Activities that enhance interaction with peers.
   d. Training on the mechanics, symbols and vocabulary displayed on the ACS.
8. If specific technology has been assigned to a student to use as a tool for academic performance, the output should be identified in the IEP. For example, if a student is provided with word processing software to produce written work, then keyboarding access and skills should be identified in the IEP as an alternative to handwriting.

   If a blind student is provided with word processing software that translates English into Braille and provides speech output, the keyboarding skills and auditory skills required to use the technology effectively should be addressed in the IEP.

Curriculum Concerns for Physically Handicapped
K-12

Issues based on meeting attended by Una Schommer-Hukill, Raul Iribarren, Pat Curtis, Sharon Brown, Barbara Gansz, Vicki Sellers and Janeen Clinton on June, 1989.

It was suggested that a multidisciplinary team address issues and concerns relating to P.I. placement and program.

Statement of Educational Goal

I. Guideline of characteristics for least restrictive placement

A. Mainstream
B. P.I. Cluster
C. Full-time, self contained
D. Center
E. V.E. unit

2. Systematic training program
Delivery Model

A. Aide/tutor companion
   1. Selection criteria for placement of an aide (have form)
   2. Job description
   3. Training in toileting techniques/feeding techniques
   4. Training in technology access
   5. Stipend when additional training is needed (e.g. if the District "pays" to train an aide on Lighttalker access, their expertise is greater than most other aides)

B. Regular teacher
   1. Characteristics of the P.I. student
   2. Behavior patterns to watch for (i.e. fatigue)
   3. Curriculum adaptation techniques
      a. Guidelines on what parts of the curriculum may need adapting
      b. Guidelines on certifying student performance in areas that P.I. student cannot perform
      c. Guidelines on grading P.I. students (e.g. if a P.I. student cannot do handwriting, then how to grade keyboarding skills and performance as a substitute)
   4. Resource guide for services offered within the district
      a. ESE Area contact person(s)/what they can do for you
      b. How to get large print materials
      c. Computer/augmentative technology-when to apply
   5. The meaning and make-up of the student's I.E.P.
      a. Resource personnel I should expect to show up at my classroom (e.g. OT/PT, Speech, P.I. itinerant teacher)
      b. How to best schedule services to least impact curriculum/classroom instruction
      b. How do I adapt my classroom/curriculum to meet I.E.P.

6. Activities to prepare classmates for a new P.I. student
   a. Videotape of P.I. student
   b. Awareness simulations (i.e. How it feels to be handicapped)
   c. How classmates can best help the P.I. student
7. Technology supplied to a P.I. student
   a. Guidelines for using the computer/printer
   b. Guidelines for using augmentative communication
8. Theraputic furniture-what is it/why have it/when to use it

C. Teacher of the Physically Impaired

1. Inservice on new emphasis for P.I. students
   a. Mainstreaming
   b. Employability skills/mobility/independence
2. Potential impact of federal/state legislation
   a. Technology
   b. P.L. 100.407
3. Inservice annually on newest technology available
   a. ID student who may benefit
   b. Understand what potential technology can provide to student

D. Administration

1. Annual inservice on awareness of P.I. student
   a. Report on P.I. statistics
      1) numbers by handicap (C.P., M.D., trauma)
      2) numbers by placement (mainstream, P.I.)
   b. Federal/state legislation
   c. District policy
   d. Considerations/impact of placement on classroom teacher and classroom setting
      1) reduce teacher/student ratio in classroom
      2) facility accessibility
2. Guidelines for Guidance Counselors on assisting trama victims returning to school
   a. The grief process
   b. Possible "danger signs"
   c. Where to turn if in-depth counseling is needed

3. Program development for the P.I. student
P. I. Model

A. How to adapt the unified curriculum
   1. Done in cooperation with Depts. of Elementary Ed. and Secondary Ed.
   2. How to grade the P.I. student (e.g. creative writing is 50% of elementary English grade but many P.I. students do not do this effectively. They can dictate their story, but this does not reveal knowledge of punctuation and grammar skills which are part of the grade.)
   3. Guidelines for "Honor Roll" if the P.I. student is not demonstrating all of the skills expected of peers
   4. Extended year program for P.I. students who need more time to complete skills required for promotion

B. **Reality therapy** for parents/teachers/administrators/aides on potential of an individual P.I. student
   1. Multidisciplinary Team
   2. Early identification
   3. Long term prognosis and impact/prospects for employability
   4. Employability/independence/mobility skills

4. **Evaluation of P.I. placement/program**

A. Mainstreamed
   1. Completed evaluation a minimum of once a year to determine if it is an appropriate placement
   2. Multidisciplinary team
   3. Progress in unified curriculum
   4. Required services to maintain mainstreamed placement
   5. Physical condition improved/stable/deteriorating

B. Aide/Tutor companion
   1. Completed evaluation a minimum of once a year to determine if position is still required
      a. Are support services of an aide still needed?
      b. Is further training required?
      c. Is relationship of aide and P.I. student benefiting the educational program? (e.g. is independence or dependence developing)

C. Level of support services required to maintain mainstreaming
   1. OT/PT
   2. Communication skills
   3. Speech
   4. Technology
   5. Others

CONCERNS FOR P.I. PROGRAM

GENERAL CONCERNS:

1. P.I. (ESE) teacher qualifications for support or self-contained units.
   need OT/PT background
   job description for teacher and teacher aide/tutor companion
   attitude that encourages independence
   rotate PT/OT interns
   training PI tutor companions/aides K-12 for P.I.

2. Need for Low Incidence Specialist to support and monitor program.

3. Need to provide awareness and training K-12 for parents, aides and teachers promoting independent living skills and motivation.

4. Need for ongoing special needs counseling for PI population (K-12).
   K-8 heavy emphasis on self-esteem, motivation
   9-12 emphasis on realistic career planning, decision making skills, etc.

5. Need for ESE and **Vocational Ed.** to make a commitment to adapt and provide appropriate, realistic training, at the high school level for **all levels of P.I.** students to ensure productive placement in the community after graduation or further post-secondary training.

6. Ongoing OT and PT services at the high school level for independent living skills (i.e. bathroom skills, self-help etc.) [Many high school students lack these skills - a MUST where possible]

7. Curriculum K-12 to provide special needs P.I.
   K-6 self awareness
   6-8 realistic career awareness
   9-12 career exploration training (include special diploma and regular diploma options)

8. Create a simulated work environment room at the Gove ESE Center.
   The workroom can be utilized by a variety of classrooms at different times.

9. A variety of work stations can be devised to develop life work skills based on a student's needs and as related to the community. The opportunity to develop skills to be more functional, independent and productive members of ones community is essential.

QUESTIONS/ANSWERS FOR THE SCHOOL

Q 1) Why should I take a physically handicapped student into my school?

A 1) All handicapped students have the right to be educated in the least restrictive environment (LRE) according to Federal and State statutes. In many cases the LRE for a physically handicapped student is his home school or the nearest cluster school. These students have the right to be educated with their normal peers as much as is deemed appropriate by a multidisciplinary team. If these students are residing in your SAC Areas they should attend their home school unless there are significant reasons why they shouldn't.

Q 2) What if my school is not accessible?

A 2) Part of the procedures to be followed in determining if a PI student should attend your school is a review by Facilities Planning and ESE staff in which they determine the extent to which your school would need renovations to make your school accessible.

Q 3) What is the school's liability for this student?

A 3) The school's liability is the same for a PI student as it is for any student in the school system. As always, there is no substitute for prudent judgement in supervising these, as well as other students.

Q 4) Who will provide my staff with necessary training to deal with this student?

A 4) Inservice training will be available to your school from both area and district ESE personnel. Training will be available regarding the student's physical management, curriculum modifications, fine motor and perceptual skills, and communication needs from these selected specialists.

Q 5) To whom does all of the specialized equipment, technology and software belong?

A 5) The specialized equipment, technology and software purchased for PI students belongs to Palm Beach County Schools, Department of Exceptional Student Education. However, it will be targeted for use by a specific student and must remain on your property records list until it can be transferred with the student to another school, or is needed for a different student when yours outgrows his/her need for specific items.

Q 6) Where do the funds come from to pay for these specialized items?

A 6) Depending upon the particular student, one of several state or federal fund sources are available. Your access to such funds would be through your area ESE Area Coordinator.

Q 7) Who is responsible for the maintenance of, and supplies for, these items?

A 7) It is anticipated that the school would budget a portion of its Exceptional Student Education funds for these purposes and would, when necessary, request additional support from the ESE Department.

QUESTIONS/ANSWERS FOR THE TEACHER

Q 1) How do I take care of this student's toileting and feeding needs?

A 1) Each student's toileting and feeding needs will differ according to the nature and severity of his/her physical impairment. For specific training you should request assistance from the appropriate ESE support staff person.

Q 2) How do I take care of this student's mobility needs?

A 2) The assistance of the appropriate ESE support staff person (i.e., Occupational or Physical Therapist; Physically Impaired Specialist) should be requested to assure proper positioning techniques. The focus is to maximize the student's independence.

Q 3) How do I care for the student's academic/curricular needs?

A 3) The first step is to include the Low Incidence Specialist in the development of the student's IEP. This should also include regular education specialists when considering specific curriculum modifications.

Q 4) What about physical education?

A 4) These students may need to have their P.E. program adapted in order to be able to participate. Consulting ESE support staff is recommended in development of the modifications.

Q 5) Will I have extra help?

A 5) If the student's physical impairment is severe enough to warrant the consideration of aide assistance, this can be requested by your principal. If, after careful review of the situation, such a need exists an aide will be provided. Many PI students at cluster sites share aides, if appropriate.

Q 6) What about field trips?

A 6) These students are regular students in your class with a particular handicap. They should be allowed to participate in all class activities. However, additional plans will need to be made regarding transportation, restrooms and lunches.

Q 7) How do I handle the other students reactions in my classroom?

A 7) Careful preparation of your students prior to the arrival of your new student is the first step. Discussions should be held with the class ahead of time to heighten their awareness of exceptional students.

Q 8) What extra equipment will I need to support this student?

A 8) The process involved in placing the student in your school includes the review for and purchase of equipment needed for the student.

BATHROOMING SUPPLIES

School's Responsibility

- The following may be needed depending on the student and his or her bathrooming needs:
  - Latex gloves (disposable)
  - Changing table with cleanable surface
  - Roll of changing paper
  - Disinfectant to clean areas
  - Disposal can with plastic liner
  - Green soap in dispenser
  - Hot water
  - Urinal
  - Bed pan

Parent's Responsibility

- Diapers
- Handiwipes
- Materials for catheterizations

SUPPLIES/MATERIALS IN STOCK AT WAREHOUSE

- Latex Gloves (disposable)
- Toilet Paper
- Disinfectant
- Plastic Liners
- Plastic/Sealable disposal can
- Green soap with dispenser

The school is responsible for purchase of these materials and supplies.

COMPUTER ACCESS OBSERVATION GUIDELINES
DRAFT

STUDENT: _____
SCHOOL: _____
TEACHER: _____ **DATE:** _____
GRADE: _____ **EXCEPTIONALITY:** _____
OBSERVED BY: _____
DATE: _____

DESCRIBE CLASSROOM SETTING: _____

_____
_____
_____

DESCRIBE LANGUAGE DEVELOPMENT:

GUIDE QUESTIONS:

Is the student verbal or non-verbal?
If verbal, can the student be understood by strangers out of context?
Can the student understand and follow verbal directions? 1-step?; 2-step?; 3-step?
Can the student retain verbal directions? short-term?; long-term?
Does the student interact with peers?
Does the student initiate conversation?
Does the student participate in class discussions?
Does the student make choices? participate in decision making?

_____
_____
_____

If the student is non-verbal:

Does the student use a communication system? manual?; electronic?
Why type of symbols are used on the system? picture? abstract-single meaning? abstract-multiple meaning? _____
What is the size of the activation contact point? _____

_____
_____

DESCRIBE READING AND MATH SKILL LEVELS

GUIDE QUESTIONS:

Is the student on grade level?
Can the student read and follow directions with or without assistance?
Does the student attend to task with or without assistance?
Does the student keep up with classroom work or require extra time to finish?
Is the student doing the same amount of work (i.e. math problems, written paragraphs etc) as the rest of the students in the class?
Have curriculum/testing adaptations been listed in the IEP?

_____
_____
_____

DESCRIBE SUPPORT SERVICES

NOTE: It is recommended that as many of the support personnel as possible be involved in any recommendation for adaptive/assistive technology.

GUIDE QUESTIONS:

What type of support services does the student receive? i.e. what services are specified in the IEP? OT? PT? Speech? Itinerant P.I.? Other?

Is the student receiving any private therapy?

Has the student received or is the student scheduled for any multidisciplinary or diagnostic evaluations including C.S.E.C.?

_____

_____

_____

PHYSICAL CONSIDERATIONS

GUIDE QUESTIONS:

AUDITORY PERCEPTION

Does the student respond to auditory stimuli?

Does the student have auditory figure ground?

Does the student attend to task or is he/she distracted by other sounds around him/her?

VISUAL PERCEPTION

Does the student attend to task or is he/she distracted by other visual stimuli in the room?

Can the student identify shapes regardless of size or orientation?

Can the student sort through the visual clutter of the keyboard?

Does the student have visual closure (i.e. visually close an incomplete shape)?

Can the student move his/her eyes without moving the entire head?

Does the student have an adquate visual field to see the whole screen? to see the entire keyboard? to see the entire expanded keyboard?

Does the monitor need to be moved into the student's best visual field?

Does the student have horizontal tracking? vertical tracking?

Can the student visually scan patterns?

Can the student localize text and graphics on the screen?

Can the student read 10 column? 20 column? 40 column? 80 column? Is a large screen monitor needed?

Can the student read a "busy" screen or is simple text needed?

Can the student read a scrolling screen?

COGNITIVE DEVELOPMENT/SEATING POSITION

Is the student ambulatory or in a wheelchair? electric wheelchair? walker? other?

Does the student require adaptations to his/her environment to maintain balance in body in space?

Does the student have control over his/her lower extremities? upper extremities?

Does the student have head control? with or without head support?

Does the student have trunk control? with or without support?

Does the student have purposeful movements or involuntary relfexes? startle movements? rigid extensions? writhing movements?

Can the student sit comfortably in front of a computer or does the body have to be angled to view the screen? or extended to access an input device?

Does the student understand the purpose and use of the adaptive device?

Can goals be established that the student understands to improve activation performance? i.e. The student will hit and release a switch ten times in one minutes while using the software program.....

Does the student understand the timing and control needed to use an adaptive device?

FINE MOTOR/KEYBOARD ACCESS

Can the student use the standard keyboard? touch typing? single-finger? one hand? both hands?

Can the student execute a clean hit on the keyboard? (strike and release with finger(s)?

Does the student cause rapid repeat of the same character on the screen?

Can the student strike more than one key simultaneously? two-keys (capital letter)? three-keys (reset computer)?

Does the student have full range of motion over the keyboard? over an expanded keyboard?

What is the endurance time for the student at the computer?

Does student have the force needed to activate keyboard? switch?enlarged keyboard?

RECOMMENDATIONS

Specify if the recommended hardware/software is critical to the academic performance of the student or supplemental.

ADAPTIVE HARDWARE:

Type of computer (justify):

Adaptations (justify):

joystick
mouse
trackball
light pen
template i.e. key guard
membrane
speech synthesis
software-specific touch sensitive tablet (type)
Adaptive Firmware Card
enlarged keyboard (type)
- standard overlay
- customized overlay(s) Who will design/program overlay?

switch (type, method of mounting/placement)
- size of switch
- shape of switch (description)
- force/pressure needed to activate AND deactivate switch
- displacement (travel time required to cause an activation)
- range of motion
- orientation of body position to switch (placement of switch)
- part of body used to control switch (mouth, head, extremity, trunk)
- affect on the body during switch activation
- time of contact
- direct access, standard scan, inverse scan
- reliability
- accuracy of student in making switch activation
- endurance of student using switch

braille output
large screen monitor
hand scanner

Adaptations to computer hardware/software:
dysfunction of rapid repeat feature
macro for two or three-key activations

Compatible software title(s) for curriculum:
word processor (talking)
word prediction word processor
talking software
Cognitive level of software

RECOMMENDATIONS:

HARDWARE:_____
_____
_____
_____

SOFTWARE:_____
_____
_____
_____

FUNDING: _____

SOFTWARE SELECTION

Consider the following:

Academic skill (subject and level of difficulty)

Educational value/curriculum objective(s)

Skills required for technical operation (single key, eye/hand coordination, full keyboard)

Ability to operate independently

Readability level of text

Learning style (visual only, visual and auditory)

Visual representation of graphics, text, color

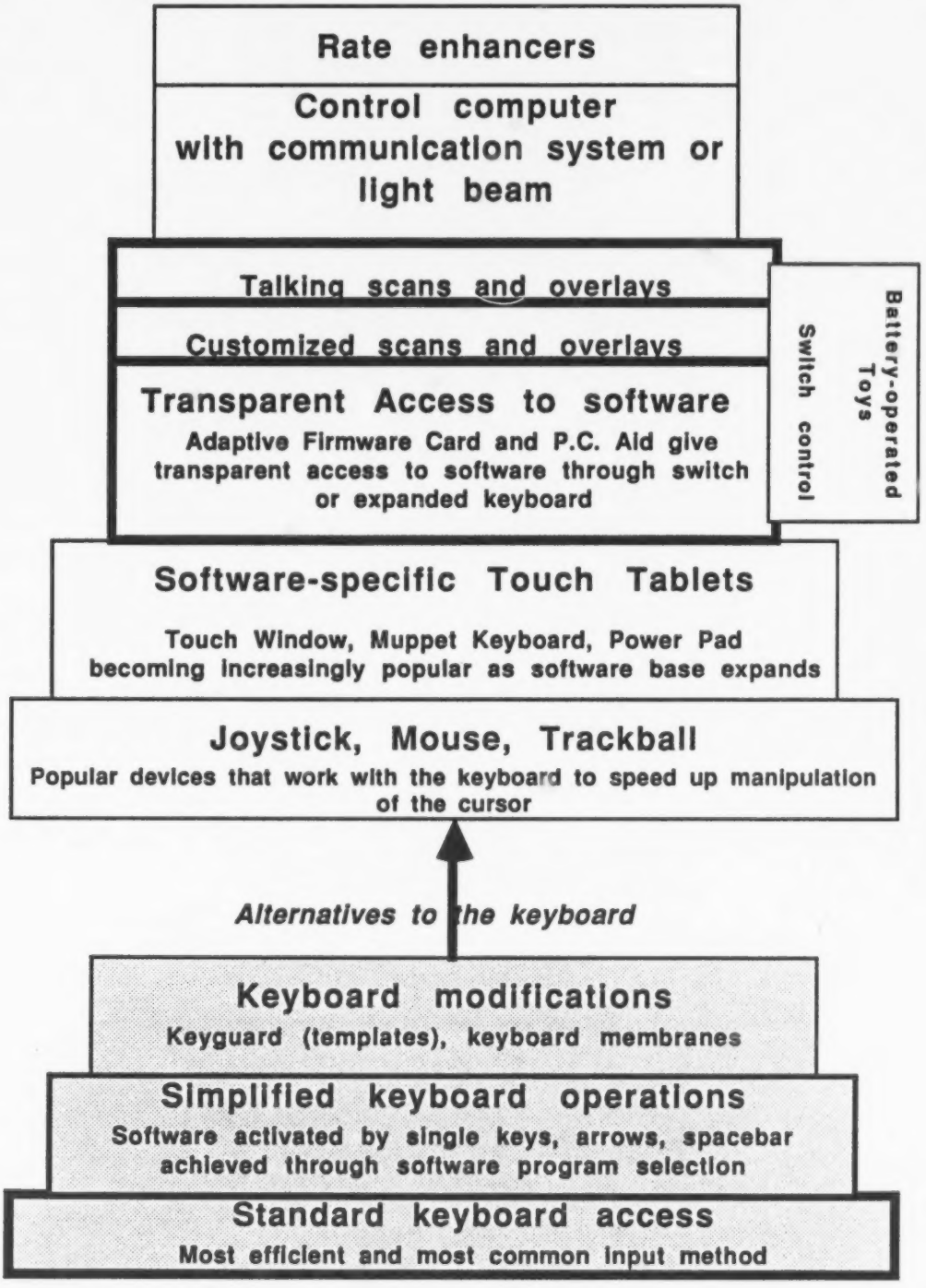
Motivational

Interactive

Ability to customize software
- Set academic performance level
- See and/or print student performance record
- Set time limits
- Turn clues off or on
- Control sound
- Change content and/or terminology

Supplemental activities to provide transfer skills

Cost (how much, who will pay)


Rate enhancers
Control computer with communication system or light beam
Talking scans and overlays
Customized scans and overlays
Transparent Access to software
Adaptive Firmware Card and P.C. Aid give transparent access to software through switch or expanded keyboard
Switch control
Battery-operated Toys
Software-specific Touch Tablets
Touch Window, Muppet Keyboard, Power Pad becoming increasingly popular as software base expands
Joystick, Mouse, Trackball
Popular devices that work with the keyboard to speed up manipulation of the cursor
Alternatives to the keyboard
Keyboard modifications
Keyguard (templates), keyboard membranes
Simplified keyboard operations
Software activated by single keys, arrows, spacebar achieved through software program selection
Standard keyboard access
Most efficient and most common input method

Hierarchy of Computer Input Devices

Select input method according to the physical abilities and social maturity of the student

I. Video pointing devices

Joystick, mouse, trackball

- devices are used to control the cursor which may be in the form of a graphic representation on the screen
- mouse if frequently used to control software with windows

These peripheral devices are common to a computer environment and are readily available in local computer stores or department stores.

II. Keyguards

Keyguard template

- hard, clear plastic cover with holes drilled for each key. Metal adapters hold down the shift key or Apple keys for individuals who use one finger access or pointing devices.
- order for specific computer model

Keyboard membrane

- covers keyboard with a soft plastic membrane that protects it from liquids.
- order for specific computer model

III. Software-specific touch tablets

Power Pad

- a large touch sensitive surface
- can be programmed to interface with the Echo speech synthesizer
- the surface can be programmed to divide into different size contact points
- increasing number of software programs can be used with it
- Apple and IBM versions of the Power Pad are available. IBM has less software

Muppet Learning Keys

- color touch sensitive surface with numbers and letters arranged sequentially
- has color keys
- some software includes overlays that fits over the tablet
- increasing software base
- Apple and IBM versions available. IBM has less software.

Touch Window

- touch sensitive screen attached to monitor with velcro strips
- has an overlay to give animation to a book
- increasing software base

IV. Transparent access

Adaptive Firmware Card

- Transparent access for Apple family of computers
- large integrated circuit board with box that attaches to the outside of the computer with velcro
- initialized menu includes programmed scans and overlays
- can be programmed for custom scans
- can be programmed for custom overlays
- interacts with Echo speech synthesizer
- newest AFC version includes many options and features ease of use

P. C. Aid

- transparent access for IBM computers
- allows switch scan and extended keyboard access
- includes an integrated circuit board and interface box

V. Transparent extended keyboard

Unicorn Extended Keyboard

(Needs Adaptive Firmware Card to interface with Apple IIe or IIGS or a P.C. Aid to interface with IBM computers)

- a large, extended keyboard with standard QWERT overlay
- customized overlays can be programmed
- works at the hardware level so it can access any software (transparent)
- can be programmed to interface with the Echo Speech Synthesizer

VI. Switches

Toggle switch
Air cushion switch
Sip and puff switch
Head lever switch
treadle switch
more....

- there are a wide variety of custom-made switches
- switches must interface with a Caffel switch box to control software programmed for switch input
- switches must interface with the Adaptive Firmware Card to have transparent control of all software

VII. Speech synthesizers

Echo speech synthesizer

- digitized speech
- can be programmed with some software to speak text
- best understood when some words are spelled phonetically
- kit includes an integrated circuit board and speaker box
- IIb version has volume control and headset plug
- can be plugged into keyboard so that all computer sounds are controlled through the Echo speaker box

Ufonic speech synthesizer

- synthesized speech

NOTE: Refer to the Resource List at the back of the handout for vendor information on each device.

SCHOOL:	TEACHER:	STUDENT:
Addison Mizner	Campbell	
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Addison Mizner		
Allamanda Elem.		
Allamanda Elem.		
Allamanda Elem.		
Allamanda Elem.		
Allamanda Elem.	Ms. Johnson	
Berkshire Elem.	Mrs. Baker	
Berkshire Elem.	Marston	
Berkshire Elem.	Marston	
Berkshire Elem.	Marston	
Berkshire Elem.	Mrs. Baker	
Berkshire Elem.	Marston	
Bethesda Hospital		
Calusa Elem.	Scott	
Calusa Elem.		
Calusa Elem.	McGowan	
Calusa Elem.		
Calusa Elem.		
Calusa Elem.		
Calusa Elem.	McGowan	
Calusa Elem.		
Calusa Elem.		
Calusa Elem.		

(student names have been deleted)

GD:	ESE:	Area	MST:	ITEM:	SERIAL NUM	COST:	PROP REC:	YEAR	STATUS:
2	PI/VI/S	SII	Y	Apple IIGS	E923NN6	$1348.94		89/90	89-313
2	PI/VI/S	SII	Y	Monitor	N9564945				89-313
2	PI	SII	Y	5.25 disk drive	KHY1004				89-313
2	PI	SII	Y	3.5 disk drive	S93DA76				89-313
2	PI/VI/S	SII	Y	ImageWriter II	2094424A	$411.08		89/90	89-313
2	PI/VI/S	SII	Y	Up and Running	Software	$69.95		89/90	89-313
2	PI/VI/S	SII	Y	GS AFC		$400.00		89/90	89-313
2	PI/VI/S	SII	Y	Unicorn		$300.00		89/90	89-313
2	PI/VI/S	SII	Y	Echo IIb		$114.50		89/90	89-313
2	PI/VI/S	SII	Y	Adjust.work table		$433.00		89/90	89-313
2	PI/VI/S	SII	Y	Language Experience	Software	$99.95		89/90	89-313
2	PI/VI/S	SII	Y	Moisture guard		$34.95		89/90	89-313
2	PI/VI/S	SII	Y	Keyguard for GS		$119.95		89/90	89-313
2	PI/VI/S	SII	Y	UMK Keyguard Kit		$150.00		89/90	89-313
2	PI/VI/S	SII	Y	26" color screen	08426816	$662.15	F8298	89/90	89-313
1	EMH	NI	N	Wolf					
				Magic Slate	software				
1	PI	NI	N	TouchTalker					
K	PI	NI	N	Observed 10/89				Track	
K	PI/CP	NI	Y	Observed 10/89				Track	
1	VI	NII	Y	Voyager XL	32134A	$		88/89	94-142
K-6	VI	NII		Apple IIe Monitor			9059-C7098	89/90	
K-6	VI	NII		Apple IIe Disk Drive			99770		
K-6	VI	NII		Apple IIe CPU			99758		
1	VI	NII	Y	19" Display Monitor	32134A1			88/89	94-142
K-6	VI	NII		Speech Synthesizer					
PreK	PI	SII	N	Wolf			F7540		
3	PI	SII	Y	Apple IIGS	E914T8A	$1348.00		88/89	94-142
3	PI	SII	Y	ImageWriter II	1830204	$411.08		88/89	94-142
5	PI	SII	Y	Apple IIGS	E90523EA	$1409.84		88/89	94-142
5	PI	SII	Y	ImageWriter II	1867822	$423.26		88/89	94-142
5	PI	SII	Y	IIGS keyguard		$119.95		88/89	94-142
5	PI	SII	Y	Talking Text Writer	Software	$149.95		88/89	94-142
5	PI	SII	Y	Magic Slate	Software				
5	PI	SII	Y	HBJ Math K-2	Software	$195.00		88/89	94-142
5	PI	SII	Y	HBJ Math 3-4	Software	$180.00		88/89	94-142
5	PI	SII	Y	HBJ Math 5-6	Software	$180.00		88/89	94-142

P.I. Hardware/Software Tracking Database

NOTES FROM LINDA LAVERTY
TEACHER OF THE PHYSICALLY IMPAIRED
ROYAL PALM SCHOOL

For children who are verbal and who have enough motoric control to access the keyboard with one finger, the expanded keyboard is still an important adaptive computer tool for the following reason:

Most P.I. children experience visual processing difficulties and practicularly visual/motor processing problems. An expanded keyboard, such as the Unicorn, assists children with these difficulties by decreasing the amount of visual information the children need to process.

(The S.L.D. population also fits this description.)

The following overlays were specifically designed for these children:

3x3 squares representing Arrow Keys, Return, Space Bar and Escape. These commands will run software such as Dinosaurs, Kermit StoryMaker, Alex and Rabbit, and Monster Maker. (Use the application program that comes with the Adaptive Firmware Card for the Apple IIGS.)

2x2 squares containing large letters of the alphabet in alphabetical order, the Arrow Keys, Space Bar, Return and Escape. This overlay is used to run any software requiring the alphabet for input including word processing. I like to use the 20 column Magic Slate from Sunburst with this overlay to teach the students how to print their names and to send short messages home. ("I love you" is a popular message my students like to type.)

1x1 squares (one inactive square inbetween active squares) containing sight words from either Dolch Sight Word List or basal reader series. Using a word processing program, the child can create sentences using their sight words. [Early form of word prediction software.]

I use the following hierarchy for scan users:

CAUSE AND EFFECT SWITCH INPUT will run the following programs:
- Join the Circus
- Make It Happen
- Symbol Writer
- Cause and Effect (public domain)

TEACHING THE CHILD TO SCAN WITH SWITCH INPUT
- First Verbs
- First Nouns
- Rabbit Scanner
- Learn to Scan
- Run Rabbit Run
- Make it in Time
- Interaction Games

CUSTOMIZING SCANS
- Cursor and computer commands (up, down, left, right, return, space bar and escape). This customized scan will run the same programs listed under the expanded keyboard.)

ALPHABET AND NUMBER SCAN

Item by item scan with space inbetween a group of four alphabet letters (e.g. A B C D E F G H I J K) [Note: letter arrangement follows the cadence in the alphabet song.) This scan will run any software program requiring alphabet or number input.

CUSTOMIZED SCAN WITH BRANCHING ARRAYS

Array #1 - names of switch users in the classroom

Array #2 - Cursor keys, Return, Space bar, and Escape (also includes repeat command)

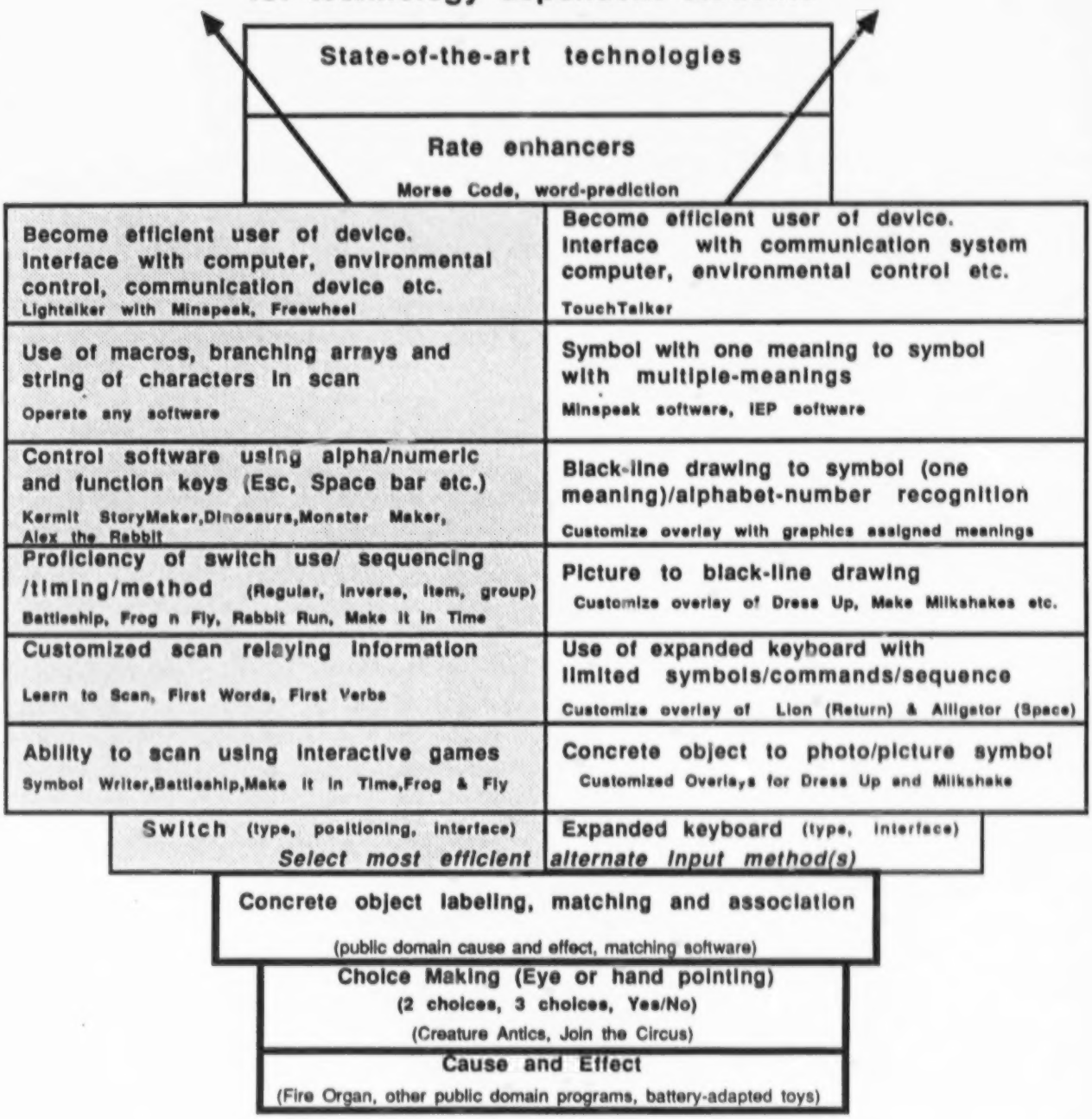
Array #3 - Alphabet letters

Array #4 - Alphabet numbers

SCANS USED FOR COMMUNICATION

Talk, Need, Do (see Diagram)

Hierarchy to access of computers and augmentative communication for technology dependent students


State-of-the-art technologies
Rate enhancers
Morse Code, word-prediction
Become efficient user of device. Interface with computer, environmental control, communication device etc.
Lightalker with Minspeak, Freewheel
Become efficient user of device. Interface with communication system computer, environmental control etc.
TouchTalker
Use of macros, branching arrays and string of characters in scan
Operate any software
Symbol with one meaning to symbol with multiple-meanings
Minspeak software, IEP software
Control software using alpha/numeric and function keys (Esc, Space bar etc.)
Kermit StoryMaker,Dinosaurs,Monster Maker, Alex the Rabbit
Black-line drawing to symbol (one meaning)/alphabet-number recognition
Customize overlay with graphics assigned meanings
Proficiency of switch use/ sequencing /timing/method (Regular, inverse, item, group)
Battleship, Frog n Fly, Rabbit Run, Make it in Time
Picture to black-line drawing
Customize overlay of Dress Up, Make Milkshakes etc.
Customized scan relaying information
Learn to Scan, First Words, First Verbs
Use of expanded keyboard with limited symbols/commands/sequence
Customize overlay of Lion (Return) & Alligator (Space)
Ability to scan using interactive games
Symbol Writer,Battleship,Make it in Time,Frog & Fly
Concrete object to photo/picture symbol
Customized Overla,s for Dress Up and Milkshake
Switch (type, positioning, interface)
Select most efficient
Expanded keyboard (type, interface)
alternate input method(s)
Concrete object labeling, matching and association
(public domain cause and effect, matching software)
Choice Making (Eye or hand pointing)
(2 choices, 3 choices, Yes/No)
(Creature Antics, Join the Circus)
Cause and Effect
(Fire Organ, other public domain programs, battery-adapted toys)

CUSTOMIZED EXPANDED KEYBOARD OVERLAYS AND SCANS

The following overlays were prepared by Linda Laverty, Royal Palm School, and Susan Rahaim, FDLRS Diagnostic and Resources Specialist.

With the steadfast cooperation of her principal, Judy Tatoul, Linda Laverty has been able to acquire a new Apple IIGS, a IIGS Adaptive Firmware Cards, Echo IIb speech synthesizer, Unicorn Expanded Keyboard, and a variety of switches. The equipment is used in her classroom for young students with physical impairments.

Susan Rahaim designed a number of overlays to evaluate students for augmentative communication.

Most of these overlays were prepared using the Talking Wordboard and Talking Scan feature of the IIGS Adaptive Firmware Card. Most of the overlays and scans also have a print feature. Frequently the story or dialog created by the student with the enlarged keyboard or switch scan are printed out for the student to keep.

The overlays are being demonstrated on the Unicorn Expanded Keyboard interfaced with the IIGS Adaptive Firmware Card, however, the same overlays can also used on the WOLF communication board and on manual boards for students at different levels of development.

The target population for these overlays and scans is young, non-verbal, physically impaired students. However, verbal students also derive a great deal of benefit from these activities, as do pre-school students and young exceptional education students with varying handicaps. The ideas demonstrated in the overlays can be adapted for older students.

A 3.5 data disk with the sample programs in this packet is available for the IIGS AFC with the Unicorn Expanded Keyboard. Send a blank 3.5 disk to:

Janeen Clinton
FDLRS/Alpha
Cedar Square Building
2112 S. Congress Avenue, Ste. 203
West Palm Beach, FL 33406

Be sure to specificy that you want a copy of the Unicorn overlay disk demonstrated at F.E.T.C.

The enclosed overlays include:

Let's play dress up - OK?

(Best used with real props including lipstick, costume jewelry, nail polish, eye make-up, blush, comb, perfume, scarf, glasses and a mirror.)

Let's play doctor. I'll be the doctor.

(Dialog between doctor and patient to develop conversation skills. Can be used with play props for a doctors office.)

I'd love to have a milkshake. Let's make one.

(Good as a sequencing and/or following directions activity.) Requires a blender, ice cream, milk, glass, straw (optional).

Let's Pretend

(Good as a language develop activity for community awareness.) Props can be used including a fireman's hat, cowboy's hat, ballerina's tiara, ghost, doctor's hat, pilot's hat, rock star colored-hair wig and astronaut's helmet.

Story sequencing (nursery rhymes)

This overlay helps non-verbal student meet the objective in the primary curriculum that states "Tell a story in sequence". The stories are broken into three or more pictures. Each picture has a part of the verse which is spoken when the picture is touched. The student "tells" his story in sequence by touching the pictures in the right order.

Verbal students are taped when they tell their stories and the tapes are sent home to the parents. Non-verbal students are also taped as the computer helps them tell their story and their tapes are sent home to the parents.

Let's sing songs

Allows the students the opportunity to make choices about what song(s) they would like to sing in class. Song titles include Alpine song, Bingo, Itsy Bitsy Spider, Six Little Ducks, Dinosaur Song, Never Smile at a Crocodile and Shake It Up Baby.

Guess Who I am

Can be a follow-up to Let's Pretend or use as a language development activity or a social studies lesson/assessment. Props can be used to provide concrete reinforcement. They would include a mailman's hat, policeman's hat, farmer's hat, chef's hat, fireman's hat, doctor's hat, painter's hat.

Play Family Nursery School (Fisher-Price)

A picture symbol has been created for each of the manipulative toys in the Fisher-Price toy Play Family Nursery School. The overlay can be used to teach augmentative communication skills or to let a student with physical impairments make selections about the toys he/she wants to play with.

Mr. PotatoHead (Playskool by Hasbro Inc.)

Allows students to play with the toy Mr. PotatoHead with a "communication partner".

The enclosed scans include:

Symbols can have meaning

Program a scan using symbols such as:
@ = My name is....
# = My age is...
^ = My family includes....
* =

Assessment

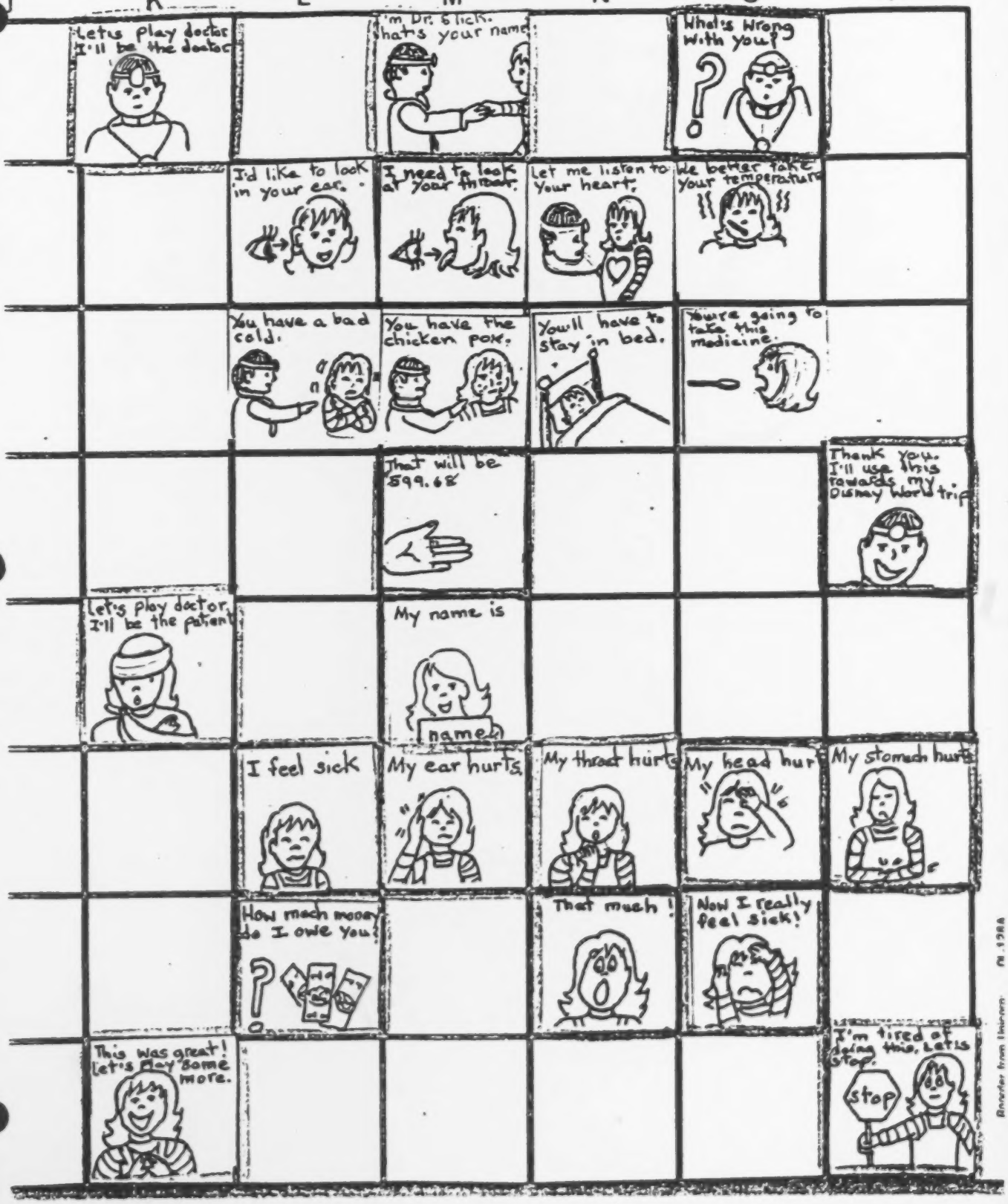
Teacher or aide types in the question and sets up a multiple choice option.
Student uses scan to indicate his/her choice of answer. Provides a more objective assessment, without influence of "body language" or other human factors that give the answer away to the student.

Talk, Need, Do

A branching array for students to make choices. See diagram on following page.

User(s) _____ Application Disk _____ Program _____ Overlay# _____

J K L M N O P

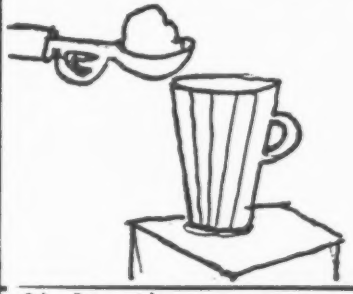

Let's play doctor I'll be the doctor
I'm Dr. Slick. What's your name?
What's wrong with you?
I'd like to look in your ear.
I need to look at your throat.
Let me listen to your heart.
We better take your temperature
You have a bad cold.
You have the chicken pox.
You'll have to stay in bed.
You're going to take this medicine.
That will be $99.68
Thank you. I'll use this towards my Disney World trip
Let's play doctor. I'll be the patient
My name is
name
I feel sick
My ear hurts
My throat hurts
My head hurts
My stomach hurts
How much money do I owe you?
That much!
Now I really feel sick!
This was great! Let's play some more.
I'm tired of doing this. Let's stop.
stop

Reprinted from Universe ©1988

I'd love to have a milkshake. Let's make one.

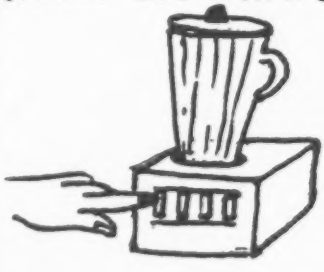
Get together your favorite ice cream, milk, and a blender.

Put lots of ice cream in the blender.



Next, pour milk on the ice cream.

Put the top on the blender and turn it on.

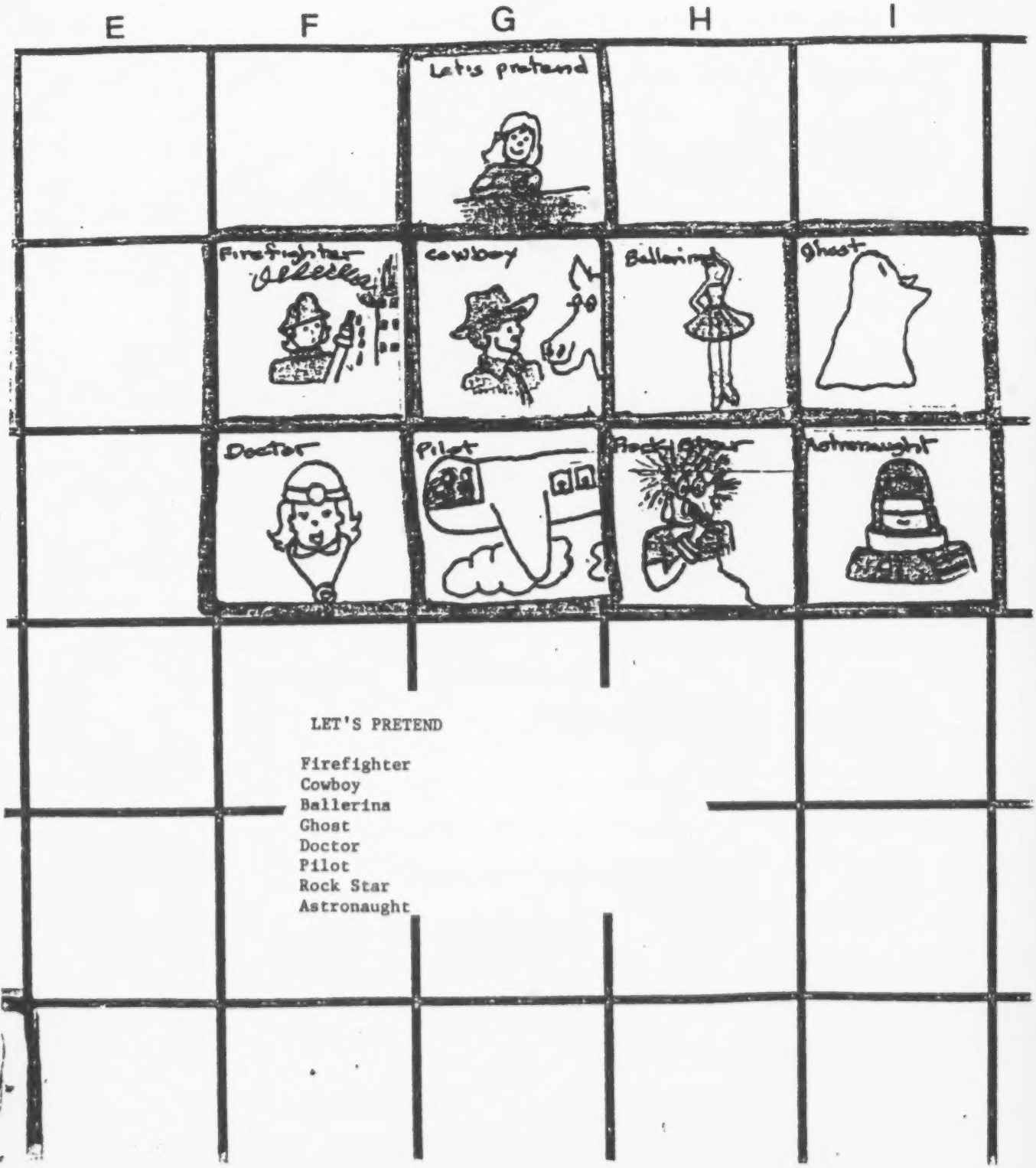


Shake it up baby!

Pour the milk shake into a glass

Drink it down!

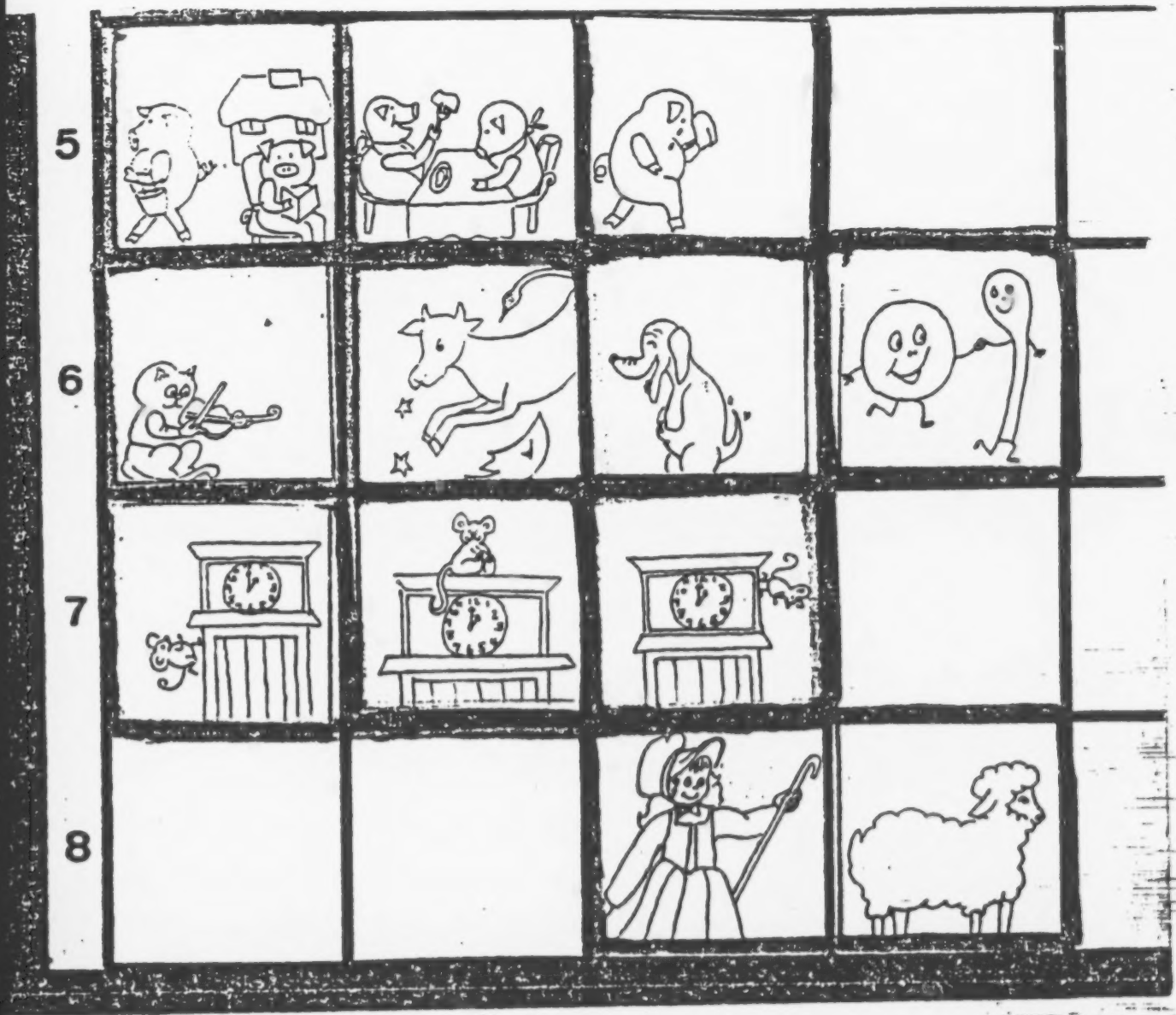
Yum - this was delicious.



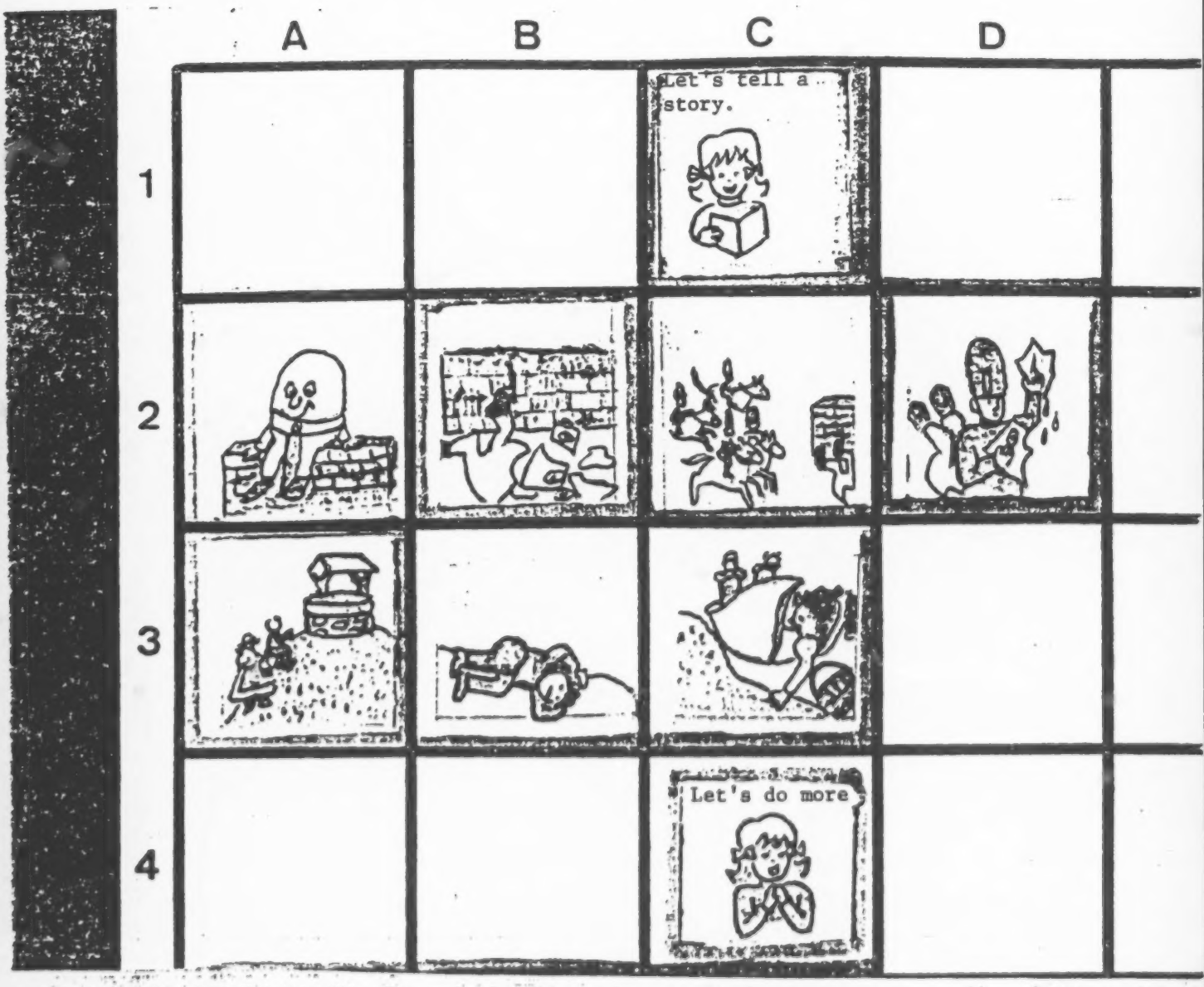
LET'S PRETEND

Firefighter
Cowboy
Ballerina
Ghost
Doctor
Pilot
Rock Star
Astronaught

STORY SEQUENCING



STORY SEQUENCING

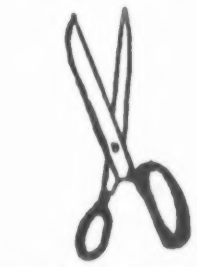


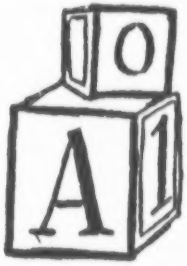
Let's sing songs.
Please!
Let's sing the Alpine Song.
I want to hear Bingo.
How about Itsy Bitsy Spider?
Can we sing 6 Little Ducks?
I'd love to sing the Dinosaur Song.
My favorite is Never Smile at a Crocodile
Let's be cool and Sing Shake It Up Baby

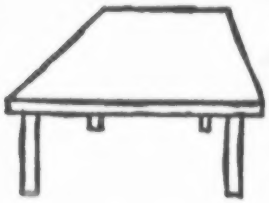
Guess who I Am

2	Lets play a game called Who Are they people in your neighborhood 	I deliver letters through rain, snow, broiling heat. 	I'm the person you call to report a crime.
3	You bring [illegible] 	I'm the person who makes delicious pies, cakes, and breads. 	If [illegible] call me,
4	When you come to school you are taught by me, the 	I'm the person you go to when you're sick and pay a whole lot of money to 	When you want to make your house look prettier you can have me paint it.

Play Family Nursery School
Fisher-Price



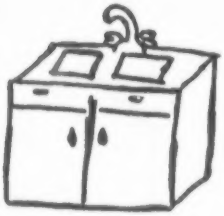




TABLE

glue

schoolbag



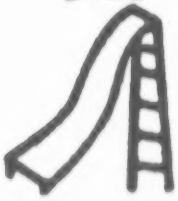
schoolbag

book

merry-go-round

teacher

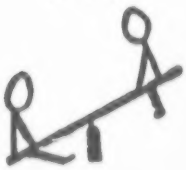
slide

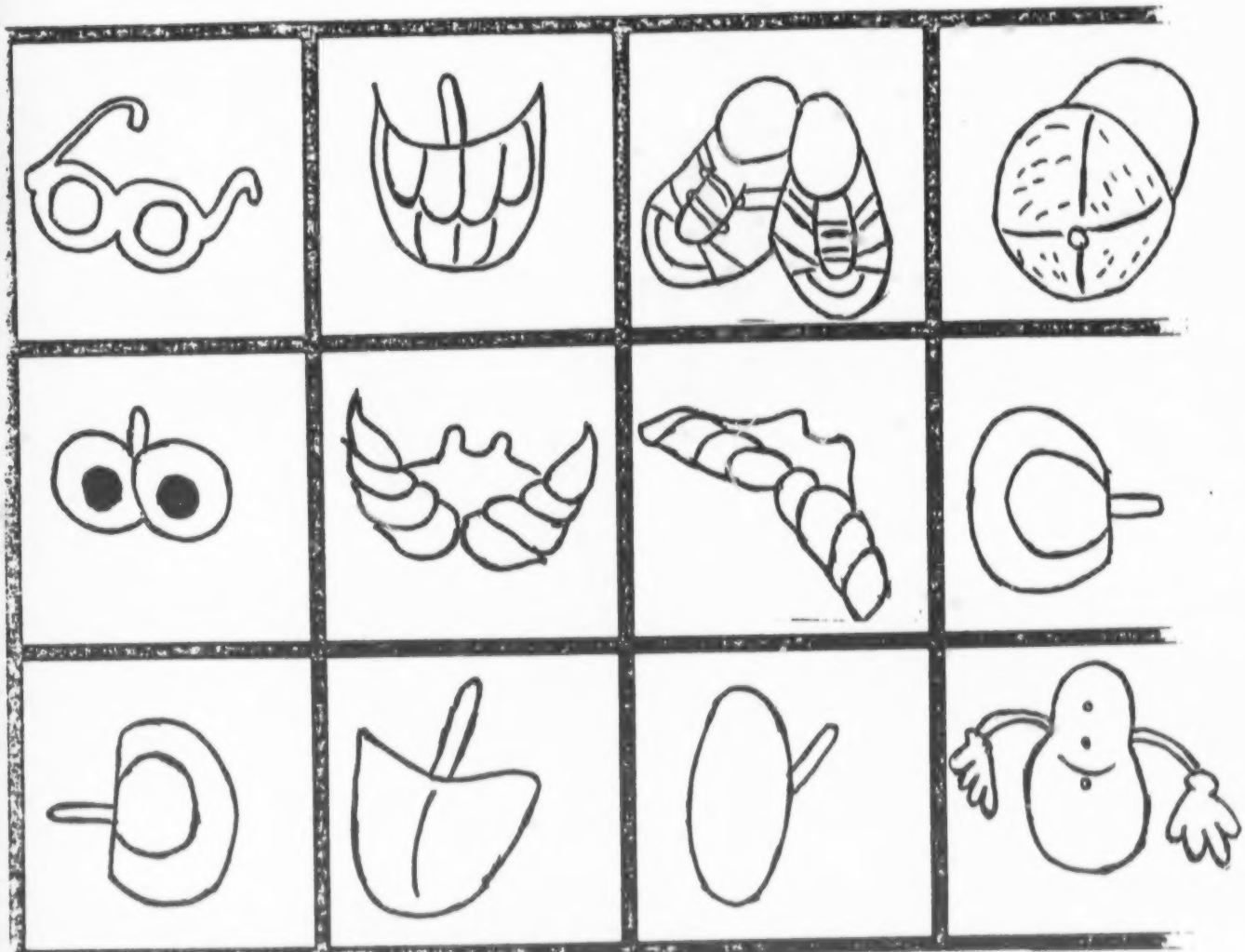


crayons

dining room

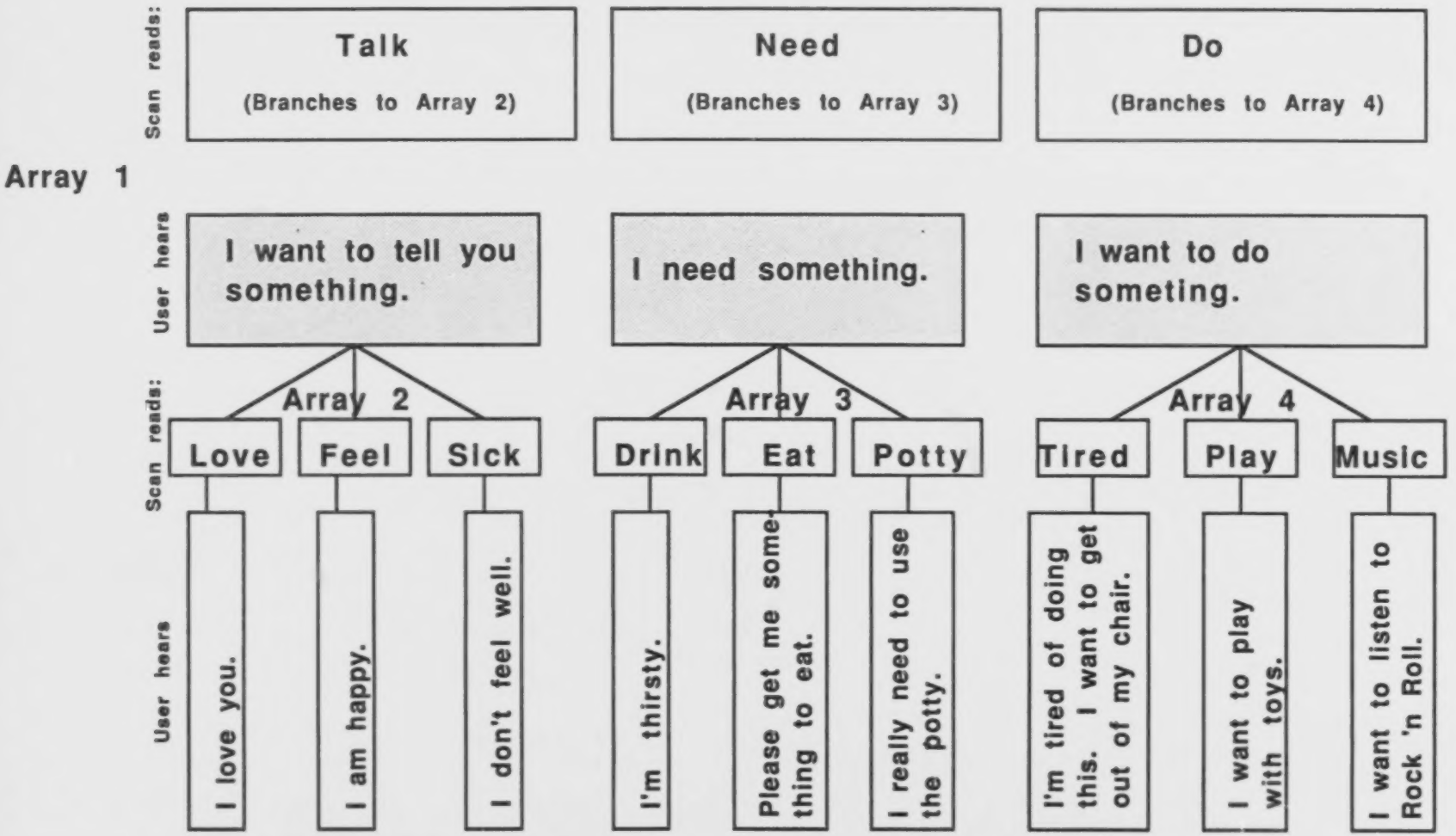
play





Mr. PotatoHead
Playskool by Hasbro Inc.

Talk, Need, Do customized, branching scan



Note: This program is used with the Talking Word Board and should only be used after the child has demonstrated that he/she understands scanning and choice making through switch activation. In other words, the child should first demonstrate mastery of scanning software programs (Learn to Scan, First Verbs and the customized scanning array of symbols.)

Morse Code Activity Packet

Note to F.E.T.C. participants:
The enclosed handouts are part of a packet assembled for teachers in Palm Beach County who are instructing students in Morse Code. Caution: The packet relies on the VISUAL method of learning CW which inhibits the speed of the user. If the visual method of learning CW will help a student in your district, you can request a complete copy of the training packet through FDLRS/Alpha.)

Distributed by FDLRS/Alpha

Contact Person:
Janeen Clinton,
Instructional Technologist

This product was developed through the FDLRS/Alpha Associate Center project awarded to Palm Beach County. The Florida Diagnostic and Learning Resources System (FDLRS) is funded through Federal Assistance for the Education of the Handicapped, P. L. 91-230, EHA, Part B, and State Assistance through General Revenue appropriations, to provide diagnostic and instructional support services to Florida's Exceptional Student Education programs, statewide.

Introduction to Morse Code

Morse Code was originally developed in 1853 by Samuel Morse. It was ued to transmit messages over telegraph lines. Today Morse Code is primarily used by ham radio operators, however, the code is gaining new popularity as an efficient computer input method for switch users.

The standard Morse code method uses a single switch to control the duration of sounds. Short sounds (dit) are represented as a dot on paper. Long sounds (dah) are represented as a dash on paper. The combination of dits and dahs are the code that represent letters, numbers, punctuation marks and computer function keys.

The Adaptive Firmware Card or P. C. Aid offer the user some immediate options when using Morse Code. The major options include:

One-switch access or two-switch access

High/low or short/long auditory feedback

Standard code or talking code (IIGS AFC option only)

Simple directions for setting up a Morse Code system are included in this manual. For additional information about choosing the correct option for a specific user, refer to the Adaptive Firmware Card manual.

It is important to remember that it takes time to learn all the codes in the Morse code system. A Morse code user must practice, just as a touch typist must practice.

It is also important to remember that accuracy is more important than speed. Start slow, and with practice both speed and accuracy will improve. (Read information below about auditory learning verses visual learning of the code.)

MORSE CODE: A new perspective

Information obtained at Closing the Gap Conference, 1989.

Several sessions at Closing the Gap featured Morse Code because its use for environmental control and augmentative/alternative communication is expanding. The following are excerpts from two presentations:

Morse Code is more properly known as CW - Continuous Wave. It is a system of binary-encoded pulses which allow transmission of information.

Computers that are adapted to accept CW input, can also convert it into ASCII which can be sent to speech and/or text output.

Functional use of CW is generally taught via a visual chart method, **however, over 100 years of experience and research in telegraphy suggest this may be a major error.**

Reliance on auditory and tactile methods for mastering code, **greatly enhance the speed** of encoding and decoding.

Research and experience confirm that a person learning code visually will reach a top encoding speed of about 12 words (60 characters) per minute, and a top decoding speed of about 10 words per minute (50 characters). It is believed that the slower rate is due to the "extra process" which requires the user to translate the signal into a visual image before encoding or decoding.

Learning code by an auditory method results in encoding and decoding speeds that exceed 20 words per minute (100 characters) and may approach 40-80 words per minute for some people.

When teaching CW auditorily, the student should listen to the code at a normal rate of about 15-20 characters per minute. They however, will begin encoding at about 3 words per minute.

CW is easier to encode when a two-position switch. One side of the switch is the dit. The other side is the dah. However, only one hand should be used to control the switch. Using both hands is exhausting and causes a crossing of the right/left brain which hampers speed and accuracy.

The Adaptive Firmware Card and P.C. Aid allow the user to control the speed and duration of contact with the switch to encode.

CW is a language that is best learned auditorily. Auditory cassette tapes are available for training purposes.

For tactile learners who have difficulty hearing the dits and dahs, cushion a large speaker cone plugged into the CW receiver (or cassette training tape recorder). Turn the volume to maximum and the speaker will vibrate with each dit and dah. The learner can "feel" the CW.

Do not use the terms "dot" and "dash" to represent CW code. Dot and dash refer to visual representations of the code. The correct terms are dit and dah.

Most CW users prefer the Farnsworth method of encoding where character elements are encoded quickly with a pause between words.

CW is most frequently taught by opposites:

common elements (or root)

CW is rarely taught in alphabetical order.

Be sure that the student can differentiate between a dit and a dah.

Select MSDOS software programs that translate Morse Code can be used on the network.

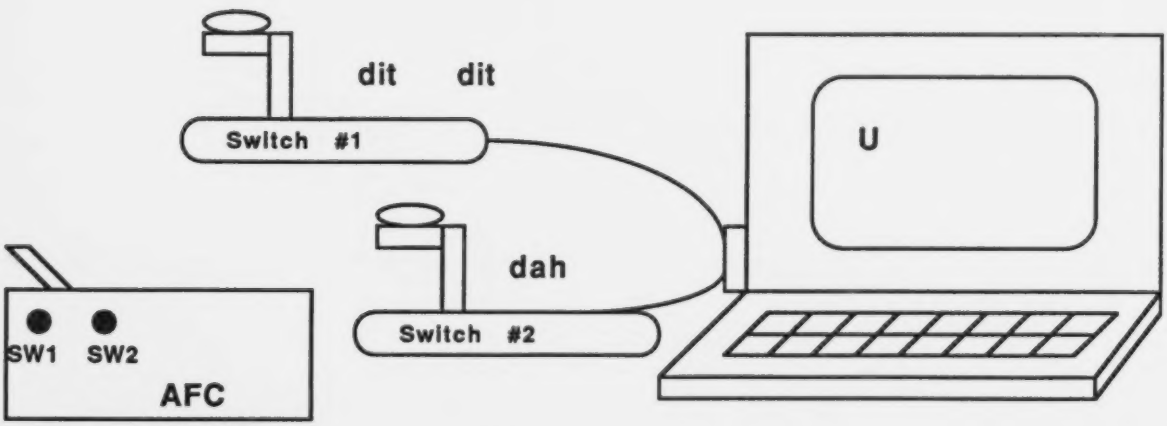
Macros can be defined with some software programs to send a string of pre-defined encoded messages.

Should I Use One or Two Switches?

Morse code is an efficient means of creating text using one or two switches. The system is based on sounds of short and long duration. On paper, the sounds are represented as dots and dashes, but theyare called dits (short signal) and dahs (long signal).

The different combinations of dits and dahs form letters of the alphabet, numbers and punctuation marks. The IIGS AFC has alsocreated codes for special function keys on the computer.

The user may choose one switch or two switches to input Morse code. The major difference between the two methods is that the 2-switch keyer will automatically send a string of dits or dahs of correct duration when you press the correct switch.



Side view of AFC

The 1-switch key produces a constant tone. The user must correctly time the duration of the dit (short) and dah (long) signal. The single switch requires more exact timing and precise motor control.

Morse Code
Directions for Use with Apple II, Adaptive Firmware Card and a switch

SETTING THE ADAPTIVE FIRMWARE CARD

Put a word processing program into the disk drive.

Turn the Adaptive Firmware Card ON.

Select "0" from the Start Up Menu. (O = Standard)

From the Input Menu select the following:

A: INPUT METHOD = 8 *

B: INPUT RATE = 3 +

Press RETURN to load the software into memory.

Follow the directions in the word processing program to open a new file.

Use the enclosed work sheets to provide practice exercises for students.

Keep the Study Guide sheet entitled "ADDITIONAL CODES" next to the computer. Students will need to use this sheet.

* The following are INPUT METHODS used by the Adaptive Firmware Card (AFC):

8-9 Single switch Morse Code

10-12 Two switch Morse Code

\+ The AFC offers a range in the INPUT METHOD. Start slow and let the student(s) increase speed by ability.

It is recommended that you use the optional tone change that provides auditory feedback to help the student distinguish between the dit and dah.

Morse Code
General Directions

One-Switch Morse Code on the Apple GS

Plug a switch into SW1 on the Adaptive Firmware Card I/O box.

There are two variations of 1-switch Morse code available:

HIGH/LOW - the tone changes to indicate the difference between a dit and a dah.

PLAIN - a continuous tone (similar to the standard Morse code used by ham operators.)

USING THE IIGS ADAPTIVE FIRMWARE CARD

Get the Choices window on the screen (press ESC twice)

Select MAKE CHANGES IN SETUP

Select METHOD/RATE

Respond Y to the caution window

Set the method to one of the 1-switch methods

Set the rate = 3

After the changes are saved to disk, LOAD the setupand press T to Test the setup.

Two-Switch Morse Code on the Apple GS

Plug a switch into SW1 on the Adaptive Firmware Card I/O box.

Plug a second switch into SW2. (Note: two separate switches or a single, dual action switch can be used.)

There are two variations of 2-switch Morse code available:

HIGH/LOW - Provides an auditory distinction between the dit and the dah.

SHORT/LONG - Makes the dah tone last three times longer than the dit tone.

USING THE IIGS ADAPTIVE FIRMWARE CARD

Boot the AFC Menu Disk.

Move the cursor to the S.MORSE (standard) or T.MORSE (talking) setup. Press Return.

Press Return again to get the CHOICES window on the screen.

Select MAKE CHANGES IN SETUP.

Respond Y to the caution window, then change the method to MORSE 2-SW HIGH/LOW (or SHORT/LONG) and the rate to 3.

When the Choices window reappears, select LOAD the setup.

Press T to Test the setup.

Morse Code International Dictionary

Distributed by
FDLRS/Alpha

The Alphabet
International Morse Code

A	•–	K	–•–	U	••–
B	–•••	L	•–••	V	•••–
C	–•–•	M	––	W	•––
D	–••	N	–•	X	–••–
E	•	O	–––	Y	–•––
F	••–•	P	•––•	Z	––••
G	––•	Q	––•–		
H	••••	R	•–•		
I	••	S	•••		
J	•–––	T	–		

Numbers
International Morse Code

1	•▬▬▬▬
2	••▬▬▬
3	•••▬▬
4	••••▬
5	•••••
6	▬••••
7	▬▬•••
8	▬▬▬••
9	▬▬▬▬•
0	▬▬▬▬▬

Morse Code
Additional Codes

Space bar	● ● ▬ ▬
Backspace	▬ ▬ ▬ ▬
Return (Enter)	● ▬ ● ▬
Delete	▬ ● ● ● ●
Tab	▬ ● ▬ ● ● ▬
Open Apple	▬ ● ● ▬ ● ●
Escape	▬ ▬ ▬ ●
Control	▬ ● ▬ ● ● ●
Right Arrow	● ● ▬ ● ● ▬
Up Arrow	▬ ▬ ● ▬ ▬
Down Arrow	▬ ▬ ● ● ▬

Caps Lock	▬ ● ● ▬ ▬
Shift	● ● ● ● ▬ ●
Period	● ▬ ● ▬ ● ▬
Semicolon	▬ ● ▬ ● ▬ ●
Colon	▬ ▬ ▬ ● ● ●
Comma	▬ ▬ ● ● ▬ ▬
Question mark	● ● ▬ ▬ ● ●
Apostrophe	● ▬ ▬ ▬ ▬ ●
Hyphen	▬ ● ● ● ● ▬
Fraction bar	▬ ● ● ▬ ●

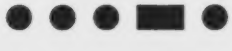
Additional Codes Part 2
Morse Code

Exclamation point !

Dollar sign $

Asterisk *

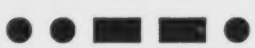
Plus sign +



Quotation marks "

Open parenthesis (

Close parenthesis)



Underline _____

Ampersand &

Number or pound sign #

Percent %

Open Square Bracket [

Closed Square bracket]

Exponent ^

At @

Less than <

Greater than >

Equal sign =

Most Used Additional Codes
Morse Code

Space bar

Backspace

Return (Enter)

Tab

Escape

Shift

Period

Comma

Question mark

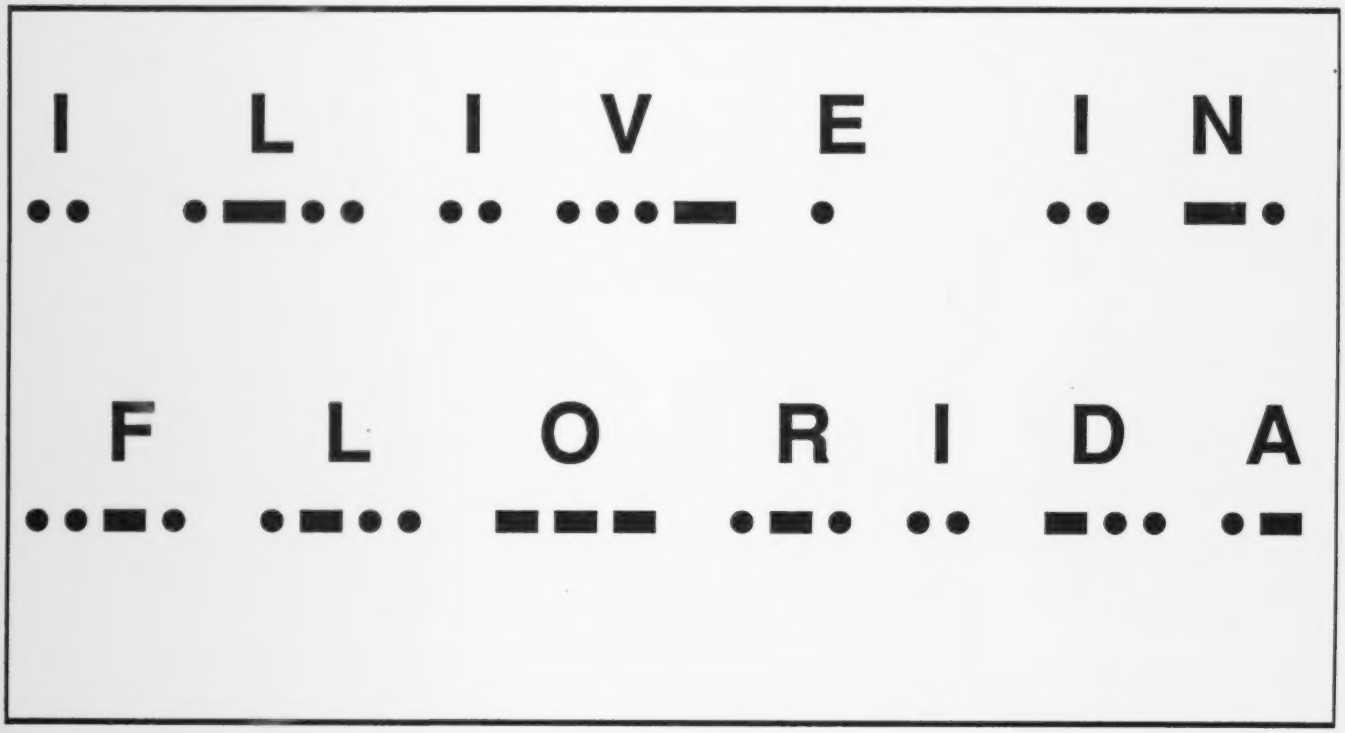
Morse Code

Directions:

Below is a sentence that reads "I live in Florida."

Below each letter in the sentence is Morse code.

Use the teletype switch. Can you type this sentence into the computer using Morse Code?



Morse Code

Directions:

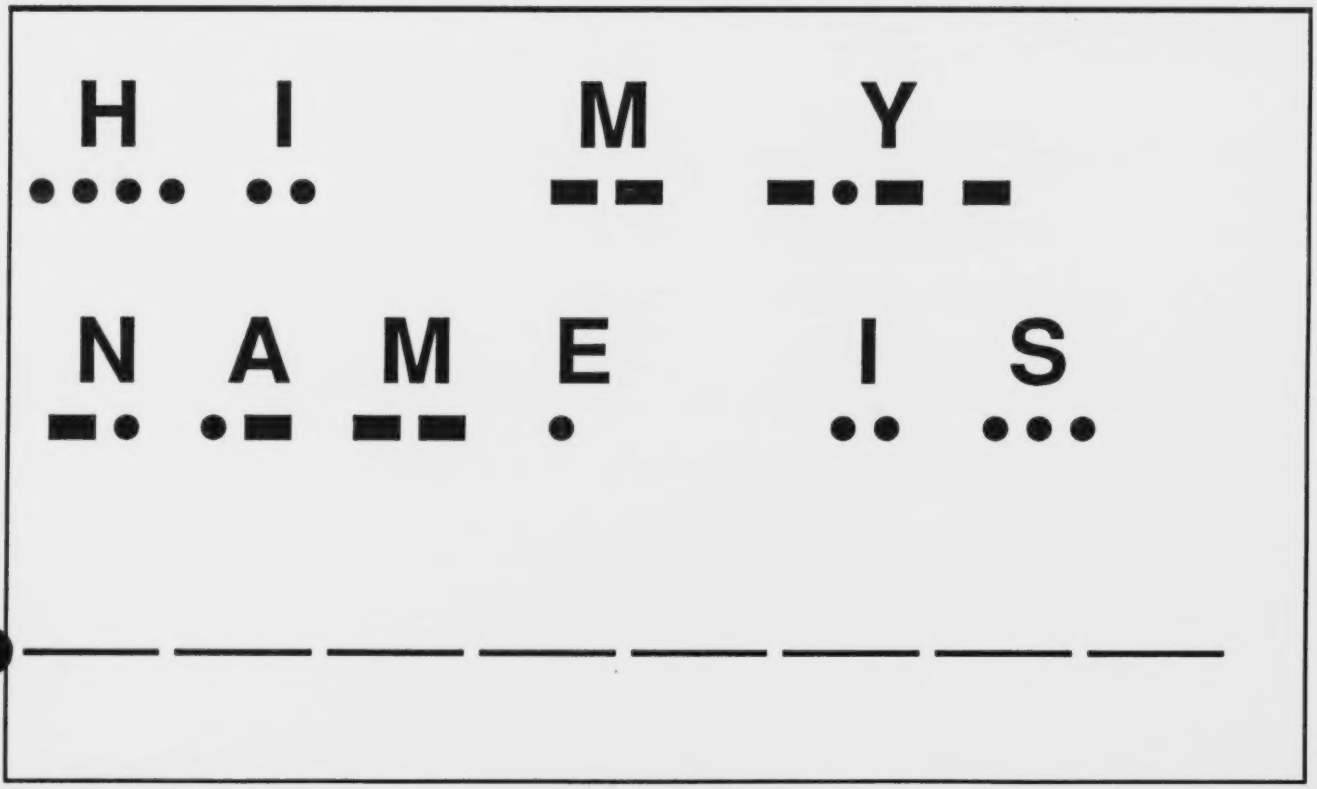
Below is a sentence that reads "Hi, my name is __ __ __ __."

There are 8 blank lines so that you can print your name.

For example, if your name is Sue, the sentence will read, "Hi, my name is Sue __ __ __." Don't worry about the extra lines. They are for people who have more letters in their name.

Below each letter is the Morse code. When you print your name, also print the dots and dashes you need to code the letters in Morse Code. Use the MORSE CODE PICTURE DICTIONARY to code your letters.

When you are finished, use the teletype switch to type the sentence in the computer in Morse Code.



Morse Code
Activity Sheet #3

Morse Code

DIRECTIONS:

Here are some words that rhyme.

Below the letters of each word is the Morse code.

Practice typing the words into the computer using the Morse Code.

Type each word three times. Did you type faster as you coded the words again and again?

If you practice, Morse Code can be easy!

b e d -••• • -••	l e d •-•• • -••
f e d ••-• • -••	N e d -• • -••
h e a d •••• • •- -••	r e d •-• • -••

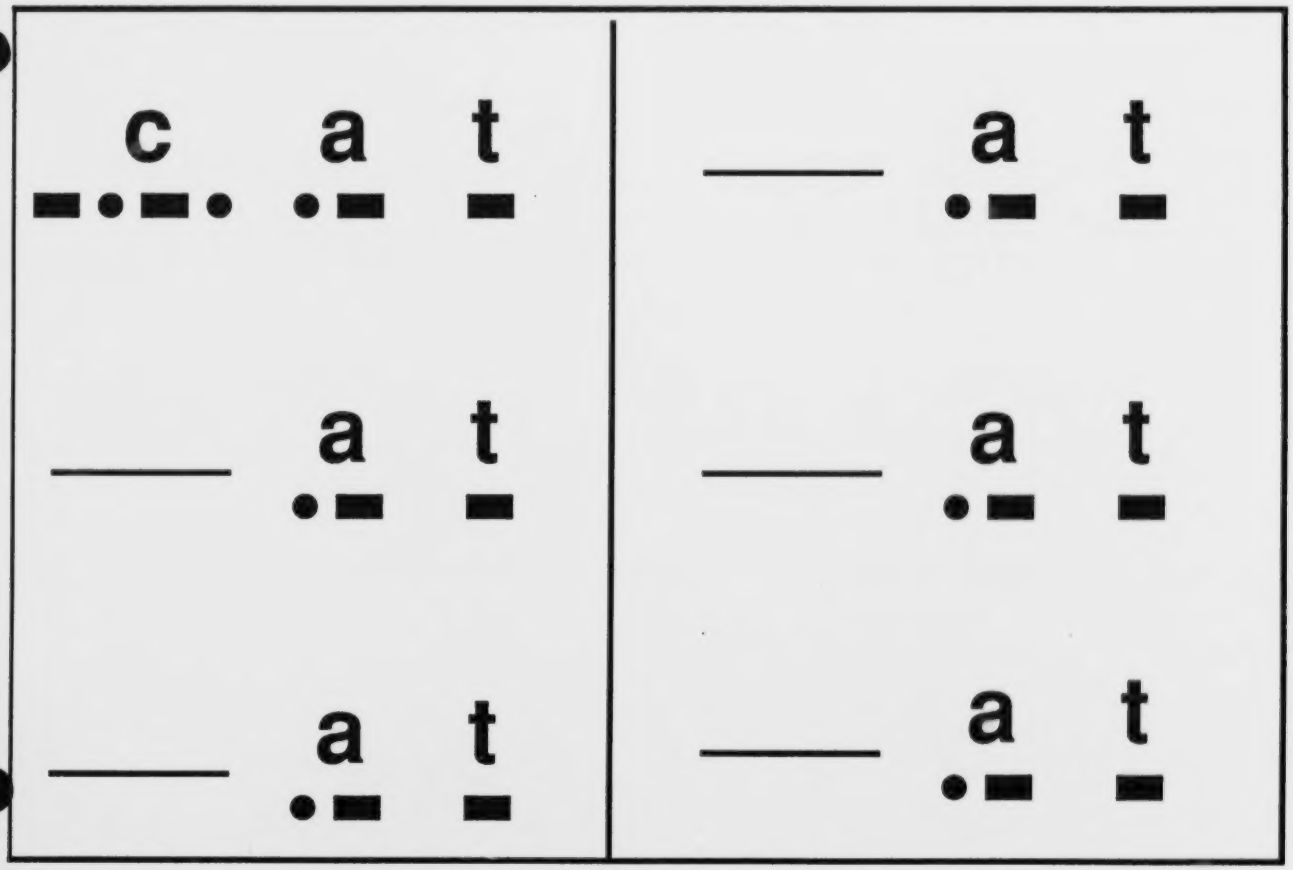
Morse Code

DIRECTIONS:

Can you think of some words that rhyme with "cat"? Here are a few examples: bat, hat, sat, pat and rat. Write down the other rhyming words you remember.

Select five of the rhyming words and write them in the box below. Use the MORSE CODE PICTURE DICTIONARY to code the letters of each word is Morse code.

Practice typing the words into the computer using Morse Code.



Morse Code
Activity Sheet #13

Numbers in Morse Code

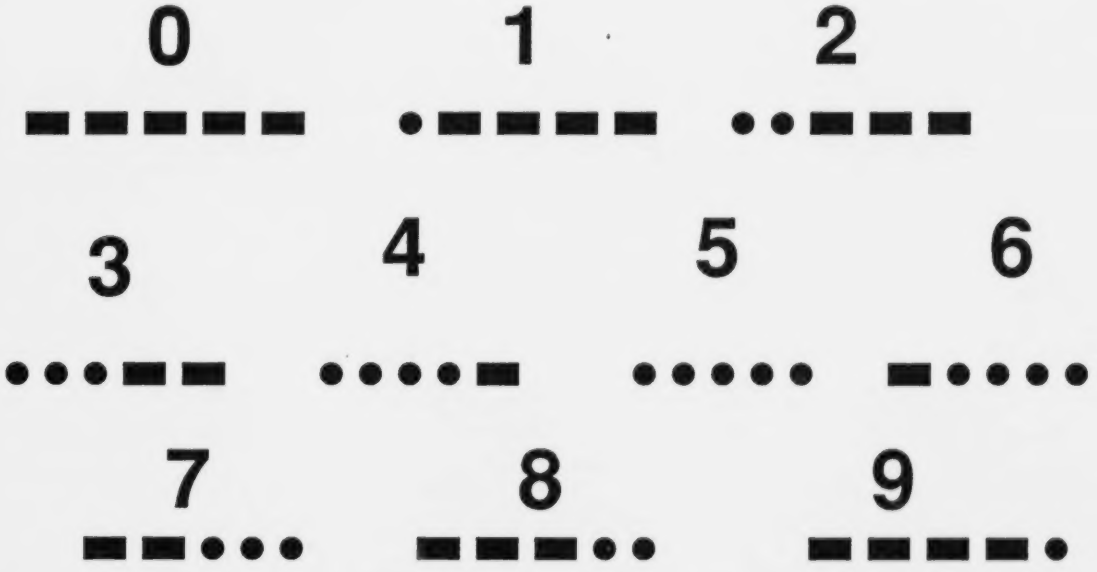
DIRECTIONS:

Look at the Morse code for the numbers zero through nine.

Practice typing them into the computer.

Look at the sentence in the box. Fill in your telephone number. Below your telephone number write the Morse Code.

Type the sentence into the computer.



My phone number is

___ ___ ___ - ___ ___ ___ ___

Morse Code
Activity Sheet #14

A MORSE CODE SECRET MESSAGE

A Note to the teacher:

The Morse Code message in activity #14 reads:

Your teacher has a treat for you.

If you use this activity, it is recommended that you have a small treat ready for the students who complete the activity. M&Ms, popcorn, pencils or some other inexpensive item is suggested. Free-time or computer-time are other "treat" possibilities.

You may wish to substitute your own secret message. Use the Morse Code INTERNATIONAL CHART and code any message you feel is appropriate.

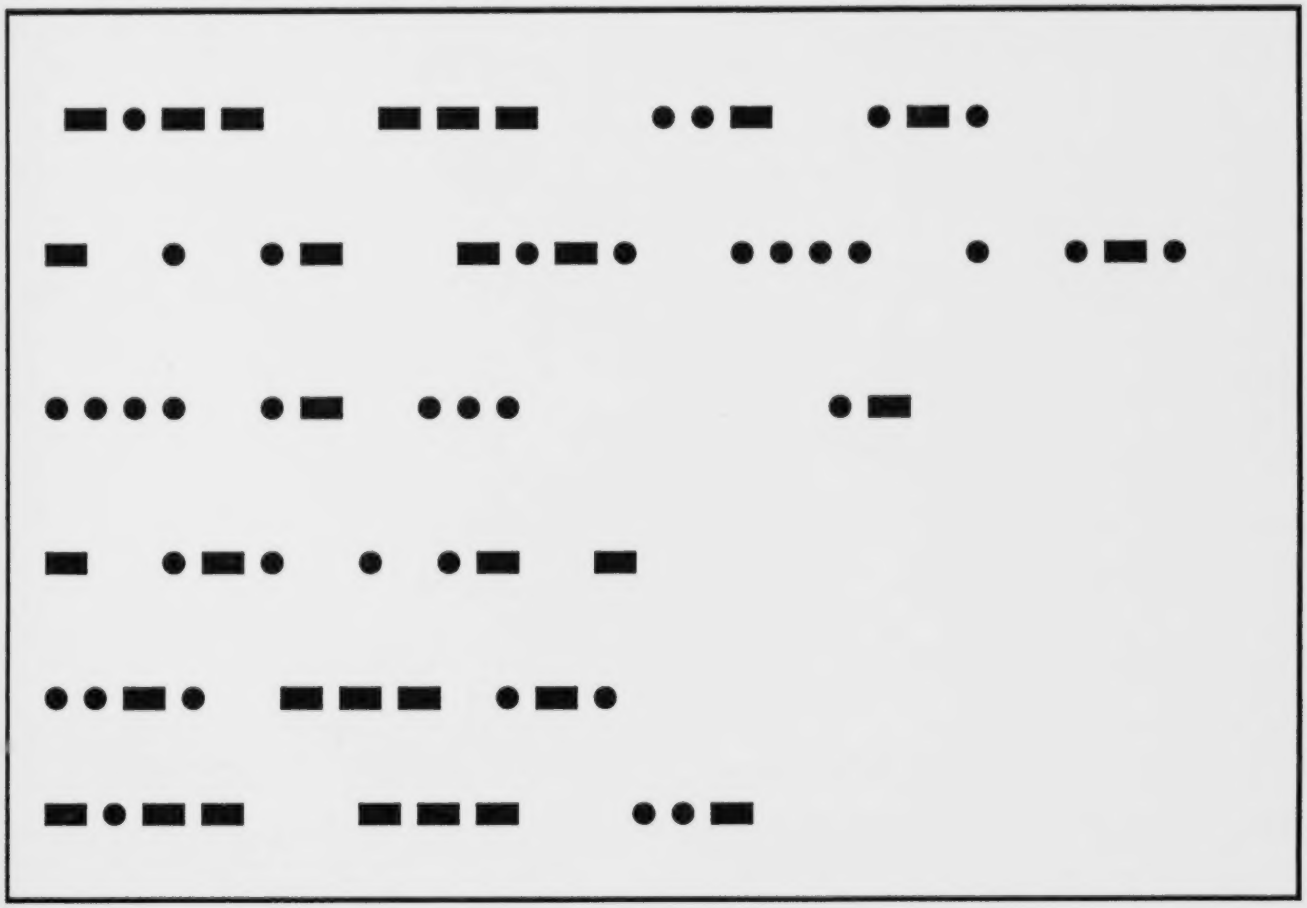
Please note, the teacher needs to "see" the decoded message on the screen. Once a student has typed the message correctly, all the students will know what it says. Hopefully this will provide additional motivation to have them practice Morse Code.

Morse Code
Activity Sheet #14

A MORSE CODE SECRET MESSAGE

DIRECTIONS:

Below is a Morse Code message. Type the code into the computer and read what the message says.



When you have typed the code into the computer, let your teacher see the message on the screen.

Make up your own secret message. Give it to another student to type into the computer. Did the student decode your message correctly?

Morse Code Picture Dictionary

Why Morse?...And How?

Welcome to Morse!

Morse Code, designed by Samuel Morse, is an effective way to communicate with those in almost any environment. Seeing as Morse Code is almost universal, it can be used with most every computer.

The following picture graphics were designed by Dixon Romney as part of an Eagle Scout Project. He realized how helpful they could be to those people who could not speak and thus released them to the general public.

Dixon hopes that many more people can enjoy communicating with others through the use of this system. If you find this system helpful feel free to copy and distribute it among your colleagues. If any of those who use this system find it helpful please send $ 5.00 to:

Dixon Romney
221 West Carter Avenue
Clarksville Indiana 47130

© 1987 by Dixon Romney
221 West Carter Avenue
Clarksville Indiana 47130
Shareware: Legal to copy and share

© 1987, Dixon Romney, Clarksville, IN

WHY MORSE?.....AND HOW?

By remembering pictures instead of dots and dashes, children, adults...almost everyone can learn Morse Code in just a few minutes. The computer can then be operated with one or two muscle movements, even the blink of an eye will do!

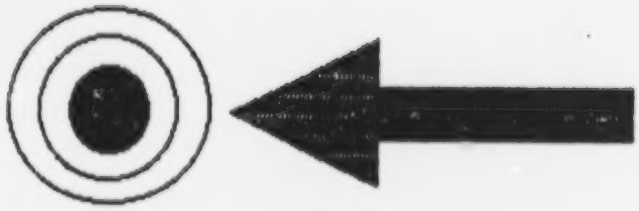
Advantages of a one switch (or of a two switch) system include:

--The eliminating of hunting for keys, thus reducing typing time in many cases.
--Because switches can be mounted wherever movements are most easily made, there is a reduction of posture problems caused by leaning over the keyboard and looking downward.
--Eye-to-eye contact is easier to maintain because the need to look at the keyboard is eliminated.
--Notes may be taken easily because there is no need to look down from the blackboard...just keep keying.
--Morse code is almost universal...it can be used with IBMs (and their clones), Apple computers, Epsons, Toshibas, etc.

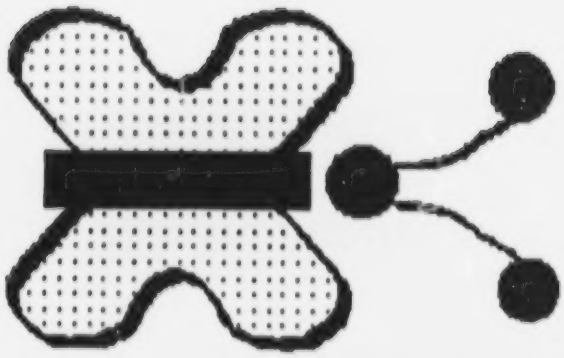
Letters and their corresponding pictures are below:
(Read icons top to bottom or left to right.)

A = Arrow
B = Butterfly
C = Grocery CART
D = Door
E = Egg
F = Frog with dimple
G = Girl
H = House
I = Eyes
J = Jack-in-the-box
K = Kitten
L = Locomotive
M = Money
N = Nose
O = OVER the candlestick
P = Packard (2 running boards)
Q = Queen's crown
R = Renault (1 running board)
S = Stop light
T = Table
U = Umbrella
V = Beethoven's 5th
W = Wagon
X = Xylophone
Y = YoYo
Z = Zipper

© 1987, Dixon Romney, Clarksville, IN

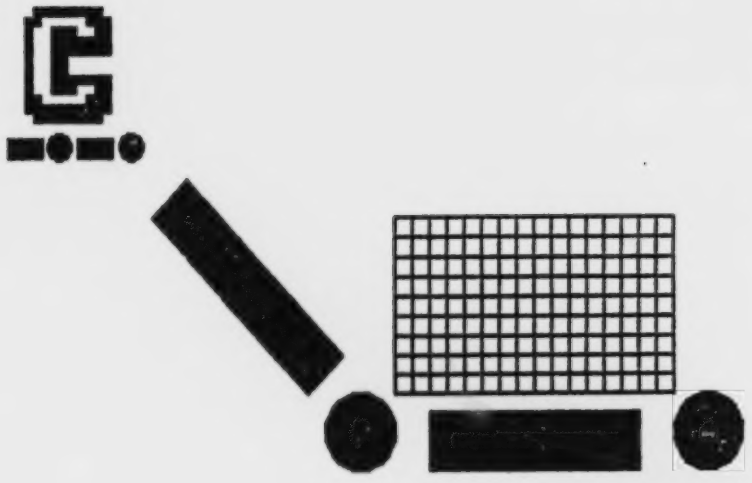


ARROW

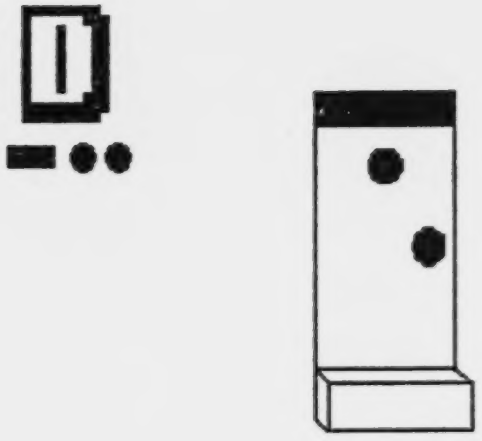


BUTTERFLY

© 1987, Dixon Romney, Clarksville, IN



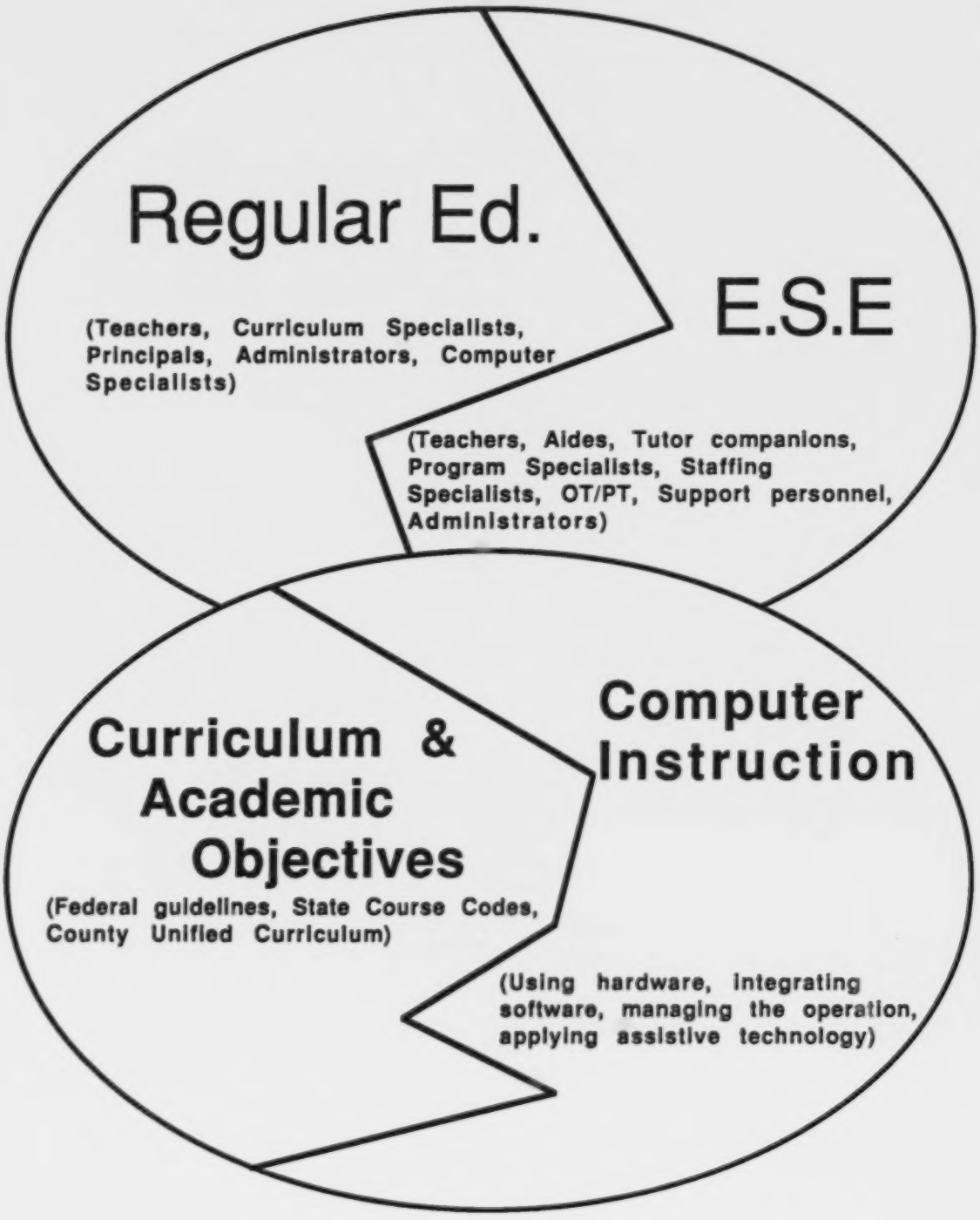
(GROCERY) CART

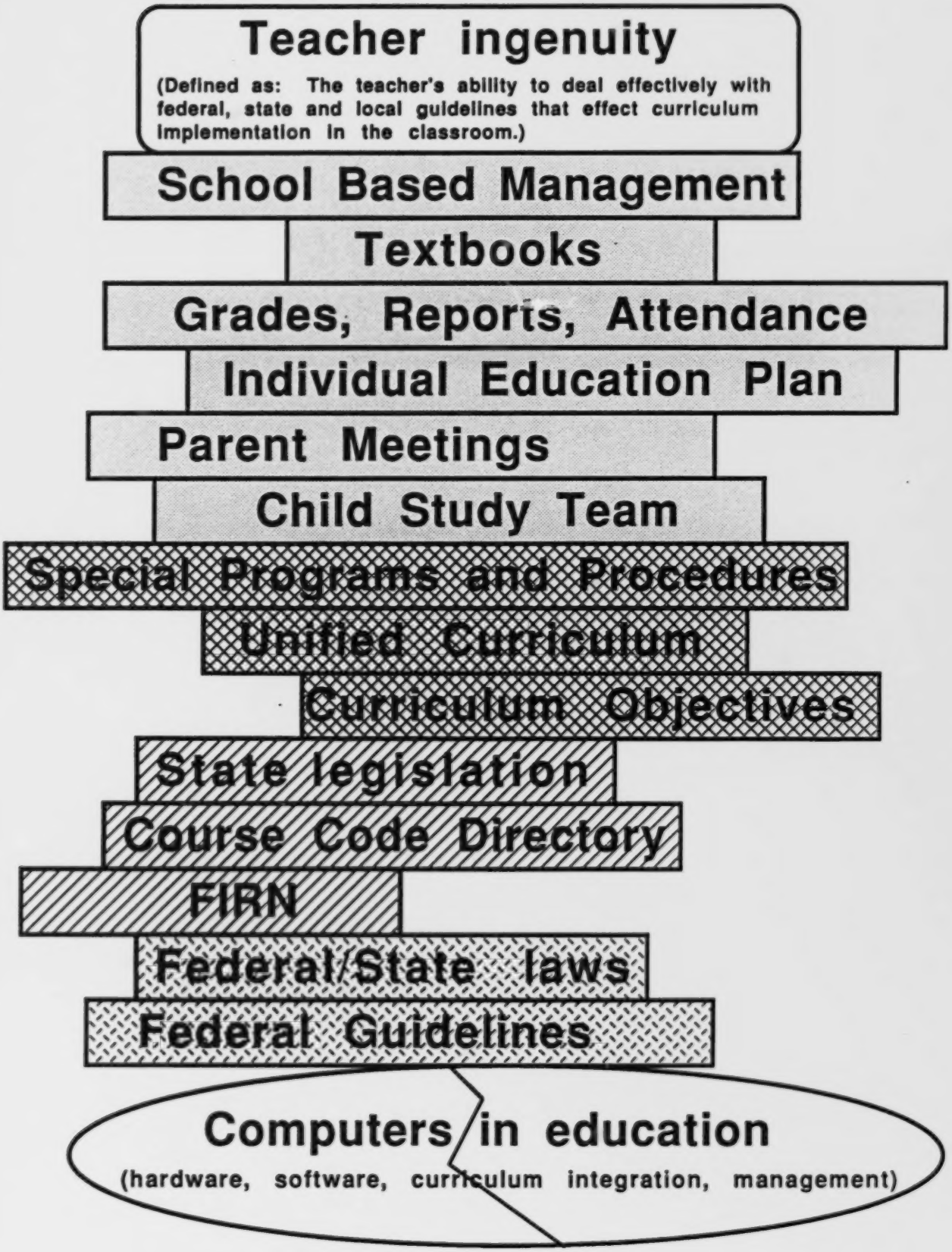


DOOR

UNITED WE STAND

A TRAINING MODEL


Regular Ed.
(Teachers, Curriculum Specialists, Principals, Administrators, Computer Specialists)
E.S.E
(Teachers, Aides, Tutor companions, Program Specialists, Staffing Specialists, OT/PT, Support personnel, Administrators)
Curriculum & Academic Objectives
(Federal guidelines, State Course Codes, County Unified Curriculum)
Computer Instruction
(Using hardware, integrating software, managing the operation, applying assistive technology)


Teacher ingenuity
(Defined as: The teacher's ability to deal effectively with federal, state and local guidelines that effect curriculum implementation in the classroom.)
School Based Management
Textbooks
Grades, Reports, Attendance
Individual Education Plan
Parent Meetings
Child Study Team
Special Programs and Procedures
Unified Curriculum
Curriculum Objectives
State legislation
Course Code Directory
FIRN
Federal/State laws
Federal Guidelines
Computers in education
(hardware, software, curriculum integration, management)

Computer Program Integration

HARDWARE
Optimize existing resources

Elementary Computer Labs
IBM Token-Ring, Novelle Networks
Computers purchased by school

Issues:
- Selection of software for network
- ESE access of network
- Adapting network/computers for PI access
- Curriculum integration
- ESE mini-labs for self-contained units
- Pre-school adapted computers
- Training on adaptive/assistive devices
- Upgrading existing technology

Middle School Computer Labs
IBM PC stand-alone Computer Literacy labs
Apple IIGS ESE mini-labs
Computers purchased by school
Pilot PS2 labs for basic skills

Issues:
- Curriculum integration
- Adapting computers for PI access
- Integrating augmentative communication
- Management of ESE mini-labs for equitable access
- Training on adaptive/assistive devices
- Upgrading existing technology

High School Computer Labs
Computer literacy/programming labs
John I. Leonard Model School Project
Vocational applications labs
Science software pilot labs

Issues:
- ESE mini-labs for computer literacy and vocational applications
- Curriculum integration
- Adapting computers for PI access
- Integrating augmentative communication
- Training on adaptive/assistive devices
- Upgrading existing technology

SOFTWARE

(Optimize existing resources)

BASIC SKILLS | PROBLEM SOLVING | APPLICATIONS

Elementary Software

Math Concepts-Lev. P-III
Reading for Meaning-Lev. I-III
Reading for Information–Lev. II-III (89/90)
Parts of Speech-Lev. II-III (90/91)
FL State allocation of software

Issues:

Selection of software for network
Curriculum integration
Selecting software for classroom
5.25 verses 3.5 disk size (CD ROM)
Access to technology/software
Software upgrades

Middle School Software

CSR Basic Skills Labs
Introduction to Computer labs
ESE Mini–labs
Magic Slate/Talking Writer
Homeworker
SRA Basic Skills Math
Public Domain Software

Issues:

Curriculum integration
Selecting software for classroom
Software upgrades

High School Software

Computer literacy course
Programming courses
Science software pilot-sites
Vocational/Business Education

Issues:

Curriculum integration
Vocational application
Selecting software for classroom
Access to technology/software
Software upgrades

125

Training on Adaptive/Assistive Technology

Training Level One

I've got a WHAT in my room?
(i.e., Technology is not being used in the classroom - identify the source(s) of the problem(s).)

- Hardware orientation
- Software orientation
- Management
- Computer Literacy (i.e. basic knowledge of system)
- Computer Lab (Elem.)

Training Level Two

Nothing Works! Why?
Common Sense Troubleshooting
(i.e., common sense is based on experience)

- Hardware implementation
- Software implementation
- Management
- Computer Literacy
- Computer Lab (Elem.)

Training Level Three

The need to know.....

- IIGS Control Panel/ MSDOS/ProDOS
- Configuring software to printer/disk drive(s)
- Talk to me, speech synthesizers (e.g. Echo IIb)
- Format, Backup
- Using switches, expanded keyboards (e.g., Unicorn)
- Using augmentative communication system (e.g. Wolf, Light/Touchtalker)
- Start-up/shut-down procedure for network (Elem.)
- When to upgrade technology
- Parent/family technology awareness activities

Training Level Four

Patch, plug and push

- Apple or IBM slot assignments
- Take it apart and put it back together again
- Customize overlay for Talking Power Pad
- Installing speech synthesizers (e.g., Echo IIb)
- Installing the Adaptive Firmware Card/P.C. Aid
- Printer (dip switches)
- Interface computer to a communication device
- Basic system operation for network (Elem.)
- Using Morse Code as input rate enhancer

Somewhere between levels two and four, successful computer integration techniques will become evident

Training Level Five

Specialization

- Programming customized switch scans
- Programming customized expanded keyboard overlays (e.g., Unicorn)
- Programming vocabulary into simple electronic communication devices (e.g., Wolf)
- Programming vocabulary into complex electronic communication devices (e.g., Lightalker, Touchtalker)
- Adapting battery operated toys for switch access

Level .....

Say What?
Pick yourself up, Dust yourself off
Start all over again...

(i.e., within five years your technical knowledge is obsolete!)

SOFTWARE

(Tasks are listed by level of difficulty)

TRAINING LEVEL ONE	How to load software and "boot" a computer Understands the purpose of documentation Knows the purpose of the write-protect notch Knows vocabulary used in computer environment Can select a software program from the network menu (Elem.)
TRAINING LEVEL TWO	Can print a document Integrates educational software into the program/lesson plans Knows copyright vs. right to copy (ethical use of software) Has a general understanding of the purpose of programming languages Uses application software Uses software on networked computer lab (Elem.) Selects appropriate software for a student with special needs Evaluates cognitive skills required for input to ensure they do not surpass task (i.e. ease of software operation
TRAINING LEVEL THREE	Can configure application software to printer/drive slot Can set IIGS Control Panel to "read" talking software Can format a data disk Can backup a program disk Designs educational activities using application software Understands common software error messages Can move in and out of different programs on the network (Elem.) Uses augmentative communication software Customizes software lessons using shell programs Understands memory limitations of hardware/software Knows system requirements and configurations Can customize/modify options and defaults from a menu
TRAINING LEVEL FOUR	Can develop activities for Talking Power Pad or Talking Word Board Can access software through adaptive devices Can use documentation to troubleshoot applications software Accesses Morse Code through the Adaptive Firmware Card (AFC) Can troubleshoot common software error messages Selects and groups soiftware by "similar controls" to assist students in remembering commands (i.e. ease of operation) Can move between different "modes" in a software program
TRAINING LEVEL FIVE	Uses AFC menu construction disk to program customized scans and expanded keyboard overlays Can program electronic communication devices e.g., Wolf, Lighttalker/Touchtalker Can install, program and manage specialized adaptive devices

HARDWARE

(Tasks are listed by level of difficulty)

TRAINING LEVEL ONE	Knows how to turn on the parts of a computer Knows how to load software Knows how to turn on the printer and print a document Uses vocabulary common to a computer environment Can identify resource people who can assist user with technology Can access software from the network menu (Elem.)
TRAINING LEVEL TWO	Can adjust knobs, cables, and plugs on the monitor Can adjust cables and plugs on the CPU Can adjust cables on the disk drive Can load paper, change ribbon, use "select light", and tighten printer cover Can identify and log network errors (Elem.) Knows District repair/maintenance policy
TRAINING LEVEL THREE	Can adjust system speed, slot assignments, and time on IIGS control panel Can interface expanded keyboard with AFC (e.g. Unicorn) Can interface switches into Adaptive Firmware Card Knows start-up sequence for electronic communication device (e.g. Wolf, Lighttalker/Touchtalker) Knows start-up and shut-down sequence for network (Elem.) Knows when to consider upgrading the technology Can set-up software and support utilities/devices
TRAINING LEVEL FOUR	Can change Apple slot assignments on GS Can disassemble and assemble a computer system Can install integrated circuit boards (e.g. Echo, Adaptive Firmware Card) Can change printer dip switches Can interface computer with a communication device (e.g. Light/Touchtalker, Freewheel) Knows basic system operations of the network (Elem.) Uses Morse Code to expedite input Can select and set-up flexible computer systems that meet a variety of special needs
TRAINING LEVEL FIVE	Can adapt battery operated toys for switch access Can troubleshoot hardware/software problems by reading detailed documentation or trial and error

MANAGING THE COMPUTER IN THE CLASSROOM

(Tasks are listed by level of complexity)

TRAINING LEVEL ONE	Takes class to lab and/or has computer in classroom Uses computers for computer literacy instruction or as a reward Has a disk container to hold software Has surge protector/expansion bar to control on/off of computer Begins to use computer-related vocabulary
TRAINING LEVEL TWO	Begins to include programmed educational software in lesson plans Develops learning center activities for computer use Has a management system for software Develops transition activities for another modality to reinforce computer-learned skills Uses correct vocabulary when referring to computer related activities Brings class to computer lab to meet specific academic goals (Elem.)
TRAINING LEVEL THREE	Integrates software/computer time into lesson plans Identifies the computer as a critical tool to facilitate classroom management i.e., grades, mailing labels, etc. Uses applications software to customize lessons for education objectives Uses pre-programmed software for adaptive devices Maintains a "wish list" of hardware/software/peripherals Assigns students to different software/levels on network (Elem.) Informs support personnel on status of student's progress so services can be coordinated Uses different methods to train student to successfully operate and integrate computer, adaptive devices, software and workstation
TRAINING LEVEL FOUR	Can set up and use computer or manual management systems to track student performance Develops and manages data files of customized lessons for applications software Has an awareness of common peripheral devices Can operate different brands of computers Maintains instructional momentum during transition to computer environment Organizes comfiguration compatibility
TRAINING LEVEL FIVE	Uses the computer as an intricate part of classroom procedures Can observe a student's limitations and envision adaptive technologies to compensate for physical handicaps Can troubleshoot hardware/software problems without major disruption to classroom operations Provides follow-up and technical support to users Recommends upgrades in equipment

ADAPTING THE COMPUTER TO THE CLASSROOM

(Tasks are listed by level of complexity)

TRAINING LEVEL ONE	Basic orientation to the operation of a computer system Basic orientation to specialized access methods that address the wide range of needs of persons with disabilities
TRAINING LEVEL TWO	Awareness of specialized equipment for the visually impaired Awareness of specialized equipment for the physically impaired Awareness of specialized equipment for the cognitive impaired Awareness of the legal, social and vocational rationale for access by students with disabilities
TRAINING LEVEL THREE	Experience with specialized equipment for the visually impaired including braille, speech output, large print and large screen Experience with specialized equipment for the physically impaired including keyboard modifications, alternate keyboards, switches, and work station and environment modifications. Experience with specialized equipment for the cognitively impaired including spelling aides, verbal prompts, outliners, word prediction and other tool software. Develops staff and peer awareness and sensitivity to adaptive computing
TRAINING LEVEL FOUR	Awareness of ergonomics i.e. combining the medical aspects of disabilities with task analysis of computer access Modifies work station Recommends appropriate adaptive/assistive devices Installs appropriate adaptive/assistive devices Provides technical assistance on adaptive/assistive devices
TRAINING LEVEL FIVE	Does accessibility analysis matching the disability to adaptive technology Assists OT/PT with positioning considerations Evaluates hardware, furniture, work station, classroom and adaptive technology for ease of accessibility Analyzes workflow design Makes training recommendations Keeps abreast of new technical developments and upgrades

Seal the crack!

Who to integrate...

Administrators (Training Task Levels 1 and 2)
Staffing Specialists (Training Task Levels 1 and 2)
Program Specialists (Training Task Levels 3, 4, and 5 if needed)
Psychologists (Training Task Levels 1 and 2)
ESE Contact Person at school site (Training Task Levels 1,2, and 3)
Occupational Therapist (Training Task Levels 4 and 5)
Physical Therapist (Training Task Levels 4 and 5)
Speech/Language Diagnostician (Training Task Levels 1, 2, and 5 if needed)
Hospital/Homebound (Training Task Levels 1 and 2)
DCS School Center Computing Specialists (Training Task Levels 1, 2, 3, and 4)
Classroom teacher (Training Task Levels 1, 2, 3, 4, and 5 as needed)
Parents/Family members (Training Task Levels 1, 2, 3, 4 and 5 as needed)
Interagency personnel (Training Task Levels 1, 2, 3, 4 and 5 as needed)

When to Integrate...
Where to Integrate...
How to Integrate...
Why we integrate...

PROGRAM

Inservice training of administrators, teachers and district personnel
Classroom visitations
Telephone contacts
Suggestions for classroom resources
Suggestions for classroom instruction
Curriculum Writing Teams
Textbook Adoption Committees
Recommendations for start-up funds for new units
Recommendations for start-up funds for new schools
Interface with Regular Education/Vocational Education
TEC Summer Institutes

STAFFING

Child Study Team meetings
Individual Education Plan (IEP)
Telephone contacts
Long-range planning at District level
Diagnostic testing

STAFF DEVELOPMENT COMPONENT INFORMATION

COMPONENT TITLE : Advanced Technical Training in Adaptive / Assistive Computer Access

DESCRIPTION : This component is designed to provide introductory and advanced training to participants in software integration, teaching techniques that make use of computer technology, computer classroom management techniques, uses of adaptive/assistive devices and programming adaptive/assistive devices.

IDENTIFIER :

MAXIMUM POINTS : 30

GENERAL OBJECTIVES :

1. To provide the participant with experience in integrating technology into classroom procedures.

2. To provide the participant with guidelines for selecting software to match a student's learning modality.

3. To provide the participant with resources, ideas and techniques to modify curriculum material for student usage.

4. To provide the participant with experience in customizing software to meet curriculum objectives through the use of shell programs.

5. To provide the participant with experience in using application(s) programs to meet curriculum objectives.

6. To provide the participant with experience in alternate input/output technologies.

7. To provide the participant with guidelines for selecting appropriate adaptive/assistive technologies to help a student compensate for handicap conditions.

8. To provide the participant with a functional awareness of techniques and methods to integrate the computer into the curriculum.

SPECIFIC OBJECTIVES :

Upon completion of the appropriate selected activities, the participant will:

LEARNING MODALITIES/TEACHING TECHNIQUES

1. Identify behavior and learning characteristics of one or more exceptionalities, and identify computer strategies appropriate for those characteristics.

2. Identify behavior modification techniques that can be used in a computer lab/learning center setting to assist in the management of exceptional students.

3. Develop an understanding of alternate teaching strategies and techniques that can facilitate the computer learning experience for exceptional students.

4. Develop an understanding of the Minimum Student Performance Standards in Computer Literacy and their implication for ESE students.

5. Develop a working vocabulary of terms relating to hardware, software and adaptive/assistive devices.

6. Demonstrate knowledge of the research base emerging in the use of computer technology with high risk students and handicapped students.

SOFTWARE SELECTION/CLASSROOM MANAGEMENT

7. Use tool and shell software to develop customized computer lessons for specific curriculum objectives.

8. Know the significance of software selection and recommended procedures for evaluating computer assisted instruction in terms of the needs of exceptional students.

9. Develop an understanding of the criteria for selecting software according to a student's best learning modality: visual, auditory, tactile-kisesthetic.

10. Demonstrate knowledge of the strengths and weaknesses of the different instructional types of software i.e. drill and practice, applications, etc. and techniques that can be used to successfully integrate them into the curriculum.

11. Demonstrate knowledge of management techniques for software and hardware that can facilitate classroom operations.

12. Demonstrate different teaching techniques for individual and group instruction using the computer as a teaching tool.

13. Develop transfer activities that assesses a student's ability to demonstrate a skill in both the computer environment and another related activity such as a work sheet or reading material.

14. Demonstrates a working knowledge of disk operating systems.

15. Demonstrates a working knowledge of manipulating the computer network environment.

ADAPTIVE/ASSISTIVE DEVICES

16. Identify a variety of adaptive/assistive devices that can be used by handicapped students to give them access to computer technology.

17. Identify which adaptive/assistive devices are software specific and which are transparent to software.

18. Know how to attach adaptive/assistive devices to computer hardware.

19. Demonstrate the ability to initialize the Adaptive Firmware Card and test other peripheral devices to ensure proper installation.

20. Know how to plug in internal integrated circuit boards.

21. Know how to access and change defaults on the control panel (IIGS specific.)

22. Know how to interface an electronic communication board with a computer so that the communication device can control computer operations.

23. Know the purpose and function of Morse Code as an alternate input/output method and how to access the code for use as a word processing tool or to control educational software.

24. Know how to adapt battery operated toys for switch access.

25. Know how to troubleshoot technical errors caused by incompatible features of adaptive hardware/software integration in the computer environment.

26. Program AFC customized scans and expanded keyboard overlays.

27. Program customized overlays for simple electronic communication devices e.g., Wolf.

28. Program customized contact points and overlays for complex electronic communication devices e.g., Lighttalker/Touchtalker.

29. Demonstrate knowledge of the purpose of assistive technology in facilitating language development in a non-verbal student.

30. Demonstrate knowledge of teaching methods to use with a student who uses assistive/adaptive technology to compensate or augment verbal and/or written expression.

DESCRIPTION OF ACTIVITIES:

LEARNING MODALITIES/TEACHING TECHNIQUES

1. A handout will identify specific characteristics of the behavior and learning styles of the different exceptionalities. (Specific Objectives 1, 2, 3, 7)

2. Various handicapping conditions including visually impaired, physically impaired and learning disabled will be simulated with participants. (Specific Objectives 1, 2, 3, 7)

3. A handout will detail State and County requirements for students to receive a regular diploma or a special diploma upon graduation from high school. (Specific Objective 4)

4. A handout will outline teaching techniques that can be used to modify the presentation of the Unified Curriculum. (Specific Objective 4)

5. A handout and demonstration will illustrate the different learning modalities and how they effect a student's ability to retain information. (Specific Objectives 1, 2, 3, 7)

SOFTWARE SELECTION/CLASSROOM MANAGEMENT

6. A handout, discussion and demonstration will identify key behavior modification techniques proved effective in classroom management of ESE student using computers. (Specific Objectives 1, 2, 3, 7, 11, 12)

7. There will be a demonstration of safety guidelines and appropriate care and handling of adaptive/assistive computer hardware and software. (Specific Objectives 11, 18)

8. A handout and discussion will provide participants with information about the purpose and role of the Individual Education Plan (IEP) in modifying the regular curriculum to adapt to a student's handicapping conditions. (Specific Objectives 1, 2, 3, 7, 11, 12)

9. Participants will review the Minimum Student Performance Standards for Computer Literacy in the context of State and District requirements for graduation/certification of mastery for ESE students. (Specific Objectives 4)

10. Participants will evaluate several pieces of software using learning modality criteria. (Specific Objectives 8, 9, 10, 11)

11. Participants will explore several different scheduling techniques that have proven successful with ESE students either in a self-contained computer lab, a regular computer lab or a classroom computer learning center. (Specific Objectives 1, 8, 9, 10, 11, 13)

12. The major types of application and utility software will be discussed and demonstrated with emphasis on their use to integrate curriculum activities into computer education. (Specific Objectives 8, 9, 11, 14)

13. Participants will operate tool/shell software to produce customized curriculum lessons. (Specific Objective 7)

14. Participants will receive lists of specific software programmed to interface with each type of adaptive/assistive device. (Specific Objective 17)

15. Participants will be provided with sections of the PASS Introduction to Computers supplemental curriculum as an example of one means of adapting regular curriculum for ESE use. (Specific Objectives 1, 2, 3, 4, 5, 7, 11, 12, 13, 14)

16. Vocabulary lists pertinent to adaptive/assistive and computer technology will be disseminated to participants. (Specific Objectives 4, 5)

17. The participants will practice the use of a computer keyboard, disk operating systems and specific function keys when executing instructional software with stand-alone and networked computers. (Specific Objectives 4, 5, 14, 15)

18. A copy of the School Board Policy on software copyright will be distributed and discussed. (Specific Objectives 18, 19, 20)

ADAPTIVE/ASSISTIVE DEVICES

19. A demonstration and discussion will provide participants with information about the common adaptive peripheral devices used with physically impaired students in the District. (Specific Objective 16)

20. A handout will provide participants with a list of peripheral-compatible software. (Specific Objective 17)

21. A demonstration and discussion will provide participants with information about the installation and operation of different adaptive/assistive devices. (Specific Objectives 18, 19, 20)

22. A handout and discussion will outline some of the curriculum controversies associated with the use of technology by handicapped students in the mainstream. (e.g., handwriting verses keyboarding) (Specific Objectives 6, 8, 9, 10, 11, 12, 13)

23. Participants will practice installing selected adaptive/assistive devices. (Specific Objective 18)

24. Participants will operate software specific input/output devices. (Specific Objectives 16, 17)

INDEPENDENT ACTIVITY
(A maximum of 6 hours independent study is available. It will be monitored at FDLRS)

1. The participants will read two sources of information (book, journal, ERIC document, database) that deal with computer use with high risk and ESE students. The participants will write a summation report on each of the two sources. (Specific Objectives 6, 16-17)

2. Participants will turn in one or more completed software evaluation form. (Specific Objectives 8, 9, 10, 11)

3. Participants will create a document using one or more application(s) software program(s). The document must relate to the use of curriculum objectives and/or classroom management. (Specific Objectives 9-13)

4. Participants will write an individual student prescription which includes appropriate software assignments to meet instructional objectives. (Specific Objectives 8, 9, 10, 11, 12, 13)

5. Participants will produce one or more products/overlays using one or more of the following software programs or hardware devices: (Specific Objectives 7, 11, 12, 27, 28, 29)
   tool/utility software
   speech synthesizer (talking software)
   expanded keyboard (talking or standard overlay)
   scan for switch access (talking or standard scan)
   augmentative communication (simple or complex device)

6. Participant will produce a transition activity for a specific piece of software to demonstrate a student's ability to perform the skill in the computer environment and another environment/modality. (Specific Objectives 3, 13, 30)

7. Participants will produce a folder activity to accompany a specific software program. (Specific Objectives 3, 11, 12, 13, 30)
   The folder activity may:

   provide directions on how to use the software program to encourage independent learning on the part of the student.

   provide a quick reference of special function keys used in the software program.

provide reinforcing/transitional activities e.g., a work sheet that must be filled out as the student progresses through the software program.

EVALUATION

Participants and instructors will assess the degree to which the activities addressed the specific objectives and will make recommendations for revision through a questionnaire/survey.

1. Participants will demonstrate a minimum 80% mastery of questions on a post-test. (Specific Objectives 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12)

2. Participants will demonstrate the operation of a software program using one or more adaptive/assistive devices. (Specific Objectives 16, 17, 18, 19)

3. Participants will demonstrate their ability to identify and label a variety of adaptive/assistive devices and identify the ESE population for which the devices are most suited. (Specific Objectives 16, 17)

4. Participants will identify and briefly describe four software programs and their use in education to meet specific objectives. (Specific Objectives 8, 9, 10, 11, 12)

5. Participants will demonstrate the installation of one or more adaptive devices. (Specific Objectives 13, 14, 15, 16, 18, 19)

Resources

ADAPTED TOYS

Toys for Special Children, c/o Steven Kanor
8 Herkimer Avenue
Hewlett, NY 11557
(516) 569-8484

From Toys to Computers
Christine Wright
P O Box 700242
San Jose, CA 95170

Homemade Battery Operated Toys and Educational Devices
Linda J. Burkhart
8503 Rhode Island Avenue
College Park, MD 20740

Texas Instruments, Inc.
P O Box 225012
Dallas, TX 75265
many of their toys are available in local toy stores

ADAPTIVE FIRMWARE CARD

Exceptional Computing, Inc. (G32e for GS and IIe with 128k)
450 NW 58th Street
Gainesville, FL 32607
(904) 331-8847

Adaptive Peripherals
4529 Bagley Avenue N.
Seattle, WA 98103
(206) 633-2610

ComputAbility
101 Route 46 East
Pine Brook, NJ 07058
(800) 345-4076

APPLE COMPUTER RESOURCES

Apple Computer Resources in Special Education and Rehabilitation
DLM/Teaching Resources Inc.
One DLM Park
Allen, Texas 75002

Apple Technical Assistance
(800) 539-9696

ELECTRONIC COMMUNICATION AIDS

Prentke Romich Company
8769 Township Road #513
Shreve, OH 44676-9421
Lighttalker, Touchtalker

Adaptive Communication Systems, Inc.
354 Hookstown Grade Road
Clinton, PA 15026
Alltalk, SpeechPAC

Adam Lab, c/o Wayne County School District
33500 Van Born Road
Wayne, Michigan 48184
(313) 467-1415

EXERCISES FOR COMPUTER USERS

Brain Gym by Paul E. Dennison
Edu-Kinesthetics, Inc.
P O Box 5002
Glendale, CA 91021

FREEWHEEL

Adaptive Communication Systems, Inc.
Box 12440
Pittsburgh, PA 15231
(800) 247-3433

HAND-CRANK ADJUSTABLE TABLE FOR P.I.

Flaghouse Inc.
18 West 18th Street
New York, NY 10011
(212) 989-9700

HEADPOINTERS

Zygo Industries
P O Box 1008
15824 S. W. Upper Boones Ferry Road
Lake Oswego, OR 97035-4066

ComputAbility
101 Route 46 East
Pine Brook, NJ 07058
(800)345-4076

Prentke Romich Co.
8769 Township Road #513
Shreve, OH 44676-9421

IBM NATIONAL SUPPORT CENTER FOR PERSONS WITH DISABILITIES

800-426-2133

MORSE CODE (CW)

Microsystems Software International, Inc.
600 Worcester Road
Framingham, MA 01701
Handi-CODE

AARL
225 Main Street
Newington, CT 06111
GGTE Morse Tutor, and training cassette tapes

QSO Tutor MSDOS public domain ($3.00)
208 Partridge Way
Kennett Square, PA 19348

MUPPET KEYBOARD

Sunburst Communications
39 Washington Avenue
Pleasantville, NY 10570-2898
(800) 431-1934

P. C. AID

Exceptional Computing, Inc.
450 NW 58th Street
Gainesville, FL 32607
(904) 331-8847

ComputAbility
101 Route 46 East
Pine Brook, NJ 07058
(201) 882-0171

POWER PAD

Exceptional Computing, Inc.
450 NW 58th Street
Gainesville, FL 32607
(904) 331-8847

ComputAbility
101 Route 46 East
Pine Brook, NJ 07058
(800) 345-4076

SOFTWARE

Attainment Company
P O Box 103
Oregon, Wisconsin 53575
800-327-4269
good pre-vocational software

Colorado Easter Seals
c/o David Schmidt
5755 W. Alameda Avenue
Lakewood, CO 80226

ComputAbility
101 Route 46 East
Pine Brook, NJ 07058
(201) 882-0171
(800) 345-4076
excellent selection of adapted and early childhood software

Cross Educational Software
504 E. Kentucky Avenue, P O Box 1536
Ruston, LA 71270
(318) 255-8921
Talking Writer, Talking Riddles

Don Johnson Developmental Equipment, Inc.
900 Winnetka Terrace
Lake Zurich, IL 60047
(312) 526-2682
Motor Training Games

Edmark Corp.
P O Box 3903
Bellevue, WA 98009-3903
(800) 426-0856

Exceptional Computing, Inc.
450 NW 58th Street
Gainesville, FL 32607
(904) 331-8847
Marblesoft, Laureate, Dil

First Byte
333 East Spring Street
Long Beach, CA 90806
Smooth Talker, Math Talk, Kid Talk

Hartley Courseware
P O Box 419
Dimondale, MI 48821
(800) 247-1380
First Words, First Verbs, Money series and many more

MECC Software
3490 Lexington Avenue North
St. Paul, MN 55126
(612) 481-3500
variety of titles

Peal Software
5000 North Parkway Calabasas, Suite 105
Calabasas, CA 91302
(818) 883-7849

Scholastic Software
2131 East McCarty Street
P O Box 7502
Jefferson City, MO 65102
(314) 636-5271
Talking Textwriter

UCLA Intervention Programs
1000 Veteran Avenue, Room 23-10
Los Angeles, CA 90024
Excellent programs for switch, Power Pad and Echo

SPEECH SYNTHESIZER

Exceptional Computing, Inc.
450 NW 58th Street
Gainesville, FL 32607
(904) 331-8847
Echo IIb speech synthesizer

Jostens Learning Systems, Inc.
800 East Business Center Drive
Mount Prospect, Ill 60056
Ufonic speech synthesizer

Street Electronics
6420 Via Real
Carpinteria, CA 93013
(805) 684-4593

SWITCHES

ComputAbility
101 Route 46 East
Pine Brook, NJ 07058
(201) 882-0171

Don Johnston Developmental Equipment
P O Box 639
1000 N. Rand Road, Bldg. 115
Wauconda, Ill. 60084
(312) 526-2682

Prentke Romich Company
8769 Township Road #513
Shreve, OH 44676-9421

Radio Shack - local store in your area sell parts to make switches or adapt battery-operated toys

Zygo Industries
P O Box 108
Portland, OR 97207-1008

TOUCH WINDOW

Edmark Corporation
P O Box 3903
Bellevue, WA 98009-3903
(206) 746-3962

UNICORN EXPANDED KEYBOARD

Exceptional Computing, Inc.
450 NW 58th Street
Gainesville, FL 32607
(904) 331-8847

Unicorn Engineering, Inc.
6201 Harwood Avenue
Oakland, CA 94618
(415) 428-1626